THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

VOL. V. ALBANY, AUGUST, 1848. No. 8.

BRIEF SKETCHES OF FARMS, &C.

We had the pleasure, in June last, of visiting a portion of the fine country on the Hoosic river and its principal tributary, the Walloomsac. Few districts are naturally more fertile than this, and none are superior to it in picturesque scenery. It was first settled soon after the close of what is commonly called the "old French war,"—the war which commenced in 1756, between France and England, each supported by their respective American colonies. In passing to and from lakes George and Champlain, many of the English and New England officers and soldiers, became acquainted with this neighborhood, and being resolved to avail themselves of its agricultural resources, shortly afterwards took up their residence here. It has long been considered a very desirable farming section, and its rural population is distinguished for independent circumstances and good farm management. The farmers, generally, seem to appreciate their advantages, and have no disposition to change their location. Consequently there are but few farms for sale; and the lands, of average quality, are nominally held at forty to sixty dollars per acre.

SURFACE AND SOIL.—The surface is mostly hilly, and in parts mountainous—a portion of the Green Mountain range extending into the district—but the swells are large, and, except in a few instances, the slopes are so gradual as to admit of easy cultivation, and are not liable to be gullied or washed by rains. The soil is a loam mixed with the debris of slate, lime and trap rocks, and is very productive of the smaller grains, vegetables and grass. The alluvions, and some of the lighter hill-lands, produce large crops of Indian corn. Apples, pears plums and cherries, flourish in most places.

WOOL-GROWING.—But perhaps the most important product of the farms in this section is *wool*. Merino sheep were early introduced here, and at a later day, the late HENRY D. GROVE brought in some of the choicest animals of the best Saxon flocks, the blood of which has been disseminated in the vicinity, as well as other parts of the country, to the great improvement of the quality of the wool. The flocks of Messrs. ROGERS, HASWELL, and others, of Hoosick are well known. Mr. R. has lately disposed of his flock, of 1,000 head; he and his sons having purchased lands in Virginia, to which they are about to remove, where they intend to re-engage in wool-growing on a large scale, as soon as the requisite preparation can be made. We saw a portion of his flock with the wool, just taken off, and have seldom seen so large a number of fleeces of equal quality, and none that were put up in better order Mr. R. procured from Mr. PATTERSON, of Washington Co. Pa., about twenty rams, in the fall of 1844, and he thinks the cross from these has been of advantage to his flock—especially in imparting constitution and additional weight of fleece.

THE FARM OF JUDGE BALL—HIS LABORATORY, &c. Our stay in the neighborhood did not admit of our making particular examinations of many of the farms. We called on Hon. L. C. BALL, who accompanied us to Bennington and vicinity. First, however, we took a view of his own place, with which we were well pleased. His residence is at Hoosic Falls, where he settled in 1833. His farm originally consisted of 400 acres, for which he paid $25,000, and made an additional outlay of some $12,000 for improvements. All the buildings and fixtures were erected under his immediate supervision, and are planned and arranged with judgment and good taste, combining in a great degree the advantages of beauty and convenience.

For several years Judge BALL carried on the whole of his farm—keeping from five hundred to seven hundred sheep, thirty to forty head of fine cattle, and six to eight horses—the sales from the farm amounting to $2,000 to $3,900 per year. But ill health has lately compelled him to relinquish the management of so much business; and on this account he has sold off 300 acres of land, reserving a homestead and 100 acres, which still gives a handsome farm.

Judge B. has for the last year or two devoted his time with as much assiduity as his health would admit, to chemical and other scientific investigations. He has just fitted a very complete laboratory, where he is now engaged in analyses, having reference to agriculture and its kindred arts. To this laboratory the student of the Ball Seminary, an excellent institution in the vicinity, have access; and Judge BALL gives, also, occasional lectures on the sciences connected with agriculture, before the pupils. The management of the school by Mr. VEEDER, the Principal, is highly satisfactory, and with the chemical department, under the care of Judge B., as an auxiliary, we have great confidence in its usefulness in imparting sound practical instruction.

We made a short visit to the very interesting mineralogical cabinet of Mr. LYMAN WILDER, at Hoosic Falls. This is one of the most extensive collections of the kind in this country, and as an individual collection we believe it is exceeded by but few in the world. It comprises over 7,000 specimens of minerals, and their arrangement is on a plan, (original with Mr. W.,) which is at once curious and convenient.

In going to Bennington, we took the road leading up the valley of the Walloomsac. The farms along this stream are well cultivated, and for good buildings, fences, and neat appearance, are scarcely surpassed by any in the country. The stream, like the Hoosic, has

many fine water privileges, several of which are occupied with establishments for the manufacture of cotton and woolen cloths, paper, &c.

REVOLUTIONARY REMINISCENCE.—Judge BALL pointed out the ground, (over which we passed,) where the battle of Bennington was fought on the 16th of August, 1777. There were two engagements; the first being an attack and capture of an entrenchment of the British, by the Americans under Gen. STARK, and the second a rencontre between the same body of Americans and a detachment of Britons, who were marching to the relief of the other force. The latter battle was a mile or so from the first. The ground, in both cases, is on the New-York side of the line, in the town of Hoosic. On arriving at the Walloomsac House, in Bennington, we were quite surprised at finding the sword which belonged to Col. BAUM, the officer who commanded the British forces on the occasion mentioned. It will be recollected that he was mortally wounded and taken prisoner in the battle. The interesting relic referred to, is the property of Mr. G. W. ROBINSON, who gave us the following history of it. When Col. BAUM was carried off the field, his sword was taken by one of the men who assisted in that duty. This man afterwards sold it to Gen. DAVID ROBINSON for two dollars, *Continental money*. The sword has since been kept in the family of Gen. R., and is, together with the scabbard, in a good state of preservation.

MANUFACTURES.—The village of East Bennington is the seat of considerable manufacturing business. Iron ore abounds in the vicinity, and a company at this place makes 2,000 tons of iron per year. There is, also, a large quantity of yellow ochre, which is used in painting, obtained here. From 600 to 800 tons of this article are sold annually, at an average price of $18 per ton. But the most important description of manufactures carried on here, is that of crockery ware. The establishment is owned by Messrs. LYMAN, FENTON and PARK, and has been in operation four years. The ware consists of the following kinds: Yellow Fire-Proof, Dark Lustre, or Rockingham, and White Flint ware. All the varieties are of superior quality—said to be equal to any imported. The sales amount to $40,000 to $50,000 annnually. The materials used are mostly obtained in the vicinity of Bennington. The works employ forty hands, who were obtained from the Staffordshire potteries, England. Messrs. L., F. & P. have lately made some experiments in the manufacture of fine porcelain, which have succeeded well. Inexhaustible quantities of the principal materials required for this kind of ware, have been found, and it is in contemplation to embark extensively in its manufacture. A few more experiments will be made, in order to fully settle its practicability; when, should results be favorable, large works will be erected, and two or three hundred workmen employed. The mineral called feldspar, which constitutes the basis of porcelain, has been found in abundance in Ashfield and Goshen, Massachusetts, and has been pronounced by those acquainted with the article, equal to any in the world. The purest quartz is obtained at various points in the Green Mountains.

Hoosic Falls is likewise a considerable manufacturing place. There are two cotton factories, which employ about 1,000 hands. Messrs. WILDER and PARSONS have here a large manufactory of machinery of differennt kinds. They make about $14,000 worth per year.

THE COTSWOLD BREED OF SHEEP.

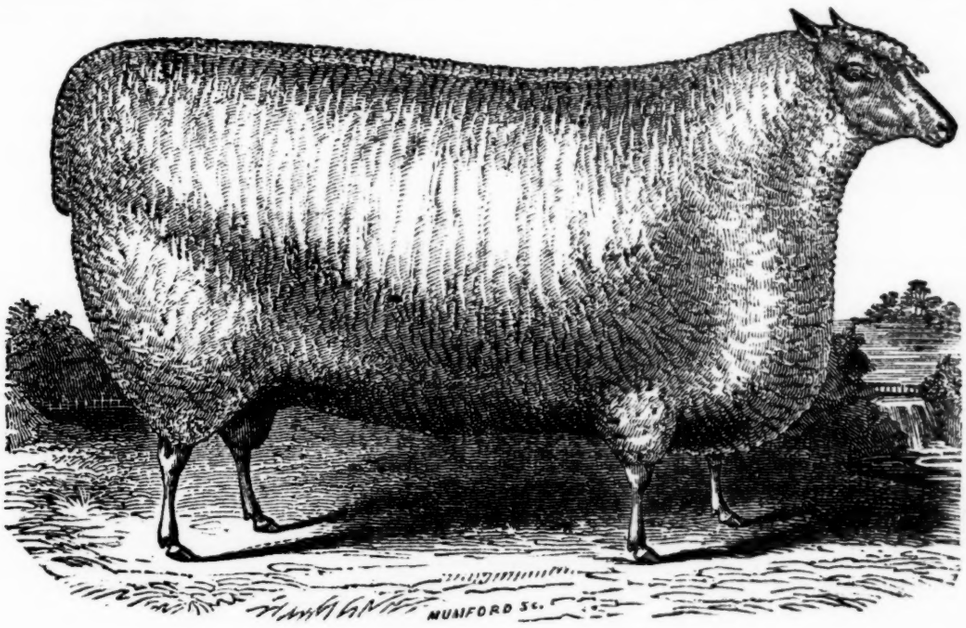
As this breed of sheep is now being disseminated to a considerable extent in various parts of this country, we have thought that a brief sketch in regard to their history would be read with interest.

The original stock from which the present *improved* Cotswolds were derived, has been known on the Cotswold hills, in Gloucestershire, England, for a great length of time. W. C. L. MARTIN, in his late work on sheep, (one of the series in "Knight's Farmer's Library,") gives an account of the breed, from which we give the following extracts. The name (Cotswold,) by which the breed is known, is said to have been derived from *cots* or *cotes* having been formerly erected in the district occupied by these sheep, for their accommodation. They consisted, we are informed, of "not only rude huts or sheds, but of extensive ranges of buildings, of three or four low stories, communicating with each other by means of gradually sloping ascents or pathways, so that the sheep had no difficulty in ascending to the topmost story. Thus no room was lost, and the most efficient shelter was provided for the flock either by day or by night, during the continuance of winter, or at the lambing season, or when it was deemed advisable to house."

The Cotswold breed, was, we are told, anciently held in such high estimation, that "in 1467, by permission of Edward IV, some of them were imported into Spain, not as some have supposed, to mingle with and improve the migratory fine and short-wooled Spanish sheep of ancient renown, but either to form the ground-work of a new long-wooled stock, or to improve some native long-wooled breed from which serge-like fabrics, requiring this kind of wool might be manufactured."

"The old Cotswolds were a large hardy race of sheep, big-boned and long-wooled, and well adapted for the hill range which constituted their stronghold. To judge from the relics still extant (though not pure,) they were flatsided, deficient in the forequarters, heavy in the hind quarters, slow fatteners, and covered with a long and weighty fleece; this latter being variable in quality, but always truly valuable as a combing wool. But the old breed is now more or less modified, and though it has not merged into the Leicester [or Bakewell breed,] is in many parts deeply imbued with the Leicester blood; in other parts, on the contrary, where hardiness is peculiarly essential, the cross of the Leicester has been only carried out so far as to give those improvements which we have more than once detailed, as the invariable result of even a single cross with this peculiar strain.

"According to the situation of his farm and the nature of his pasturage, does the Cotswold farmer manage his flock. Perhaps the prevalent breed may be half Cotswold and half Leicester. But in sheltered places and on good land, the strain of the Leicester may be found to predominate; while in more exposed situations the farmer, finding the Leicester cross tending not only to the diminution of the size of his sheep, and the weight of his fleeces, but to the loss of due hardiness and fertility, increases the Cotswold blood in his flock, and proceeds rather upon the principle of selection than of admixture to a rash extent, with the Leicesters. In both instances the farmer is right; in the one case, he has the means of feeding off rapidly, and he is content with the loss and a lessened weight of fleece; his profits arising from early maturity and from the capability of the land for feeding at a given time, more sheep of the crossed breed than the old, so as in reality, to return at a quick ratio a greater



New Oxfordshire Ram, imported by C. B. Reybold, Esq.

weight of mutton than formerly. To him wool is of secondary importance. The farmer whose land is exposed, and affords only a scanty pasturage, will find his profit rather in wool than in carcase; he could not, as respects the latter, compete, even if he would, with the farmer of the vale a few miles distant, but he will make up his profits in weight of wool. He therefore takes care that the old strain shall not prevail over the Leicester cross, (the benefits of which he is not altogether unwilling to lose,) and adapts his management to the circumstances in which he is placed. He does not lose sight of the fattening qualities and early maturity; but he as little loses sight of hardiness, fertility, and size, and of weight of fleece."

A breed which may, perhaps, be called a branch of the Cotswolds, has rather recently appeared in England, under the name of the "*New-Oxfordshires.*" They have been very successful competitors at the great shows of the Royal Society, and the Smithfield Club, for the prizes on "Long-wooled" sheep, as distinct from the Leicesters. One of the most celebrated breeders of this variety, is Mr. Charles Large, of Broadwell, Oxfordshire. From him Mr. C. B. Reybold of Delaware City, Del., obtained the two famous rams which he exhibited at the show of the N. Y. State Ag. Soc. at Saratoga, and the remarkable weight of which we mentioned in our April number.

Mr. Robert Smith, in a prize essay on the breeding and management of sheep. (written for the Royal Agricultural Society,) thus describes the New-Oxfords:

"They are of large dimensions, and have a great propensity to fatten, arising chiefly from their wide frame, quietude, and open texture of flesh, which is of quick growth, and consequently expands itself more rapidly than many others; but they do not possess that exactness of form peculiar to smaller animals, though they have a better carriage. For several years the male animals have been eagerly sought after, with a view to increase the size and frame of other long-wooled breeds."

HOW IT CAN BE DONE.

Eds. Cultivator—In the May number of the *Cultivator*, I noticed the remarks of Mr. Allen, with his very sensible request that the "Legislature of Connecticut, at their next session, would pass a law similar to the one in Massachusetts," for preventing animals from running at large in the highway. For Mr. Allen's sake, and for the comfort and convenience of all the good people of "the land of steady habits," we wish so too; and when we look at the fitness of the law, and its general influence on the well being of the farmer, we wish that it might be adopted by every state in the Union. Nor do we consider this wish vain, or one unlikely at some time to be realized.

The utility of such a law is unquestionable. It is the pledge of the public to guarantee individual rights in property, a portion of which is taken for public benefit. When a "highway is laid out," the only claim which the public make upon the premises, is the *right of travel and repair.* The right of soil with the grass and trees growing upon it, remain vested in the owner of the premises from whom the land is taken. This point is settled by common law of ancient date. Thus it is said: "Though every highway is said to be the King's, yet this must be understood so as that in every highway the King and his subjects may pass and repass at their pleasure."

"But the freehold, and all the profit of the trees, &c., belong to the lord of the soil, or the owner of the land on each side of the way." Also, "the lord of the soil shall have an action of trespass for digging the ground." See abridgment of common law, vol. 3, page 694. "Land covered by a highway may be recovered by a writ of ejectment," where the public abuse their right. Lord Mansfield in delivering the opinion of the court in a case of ejectment, says—"the King has nothing in an highway, but a passage for himself and his people, but the freehold and all the profits belong to the owner of the soil; so do all the trees upon it and mines under it, which may be extremely valuable." Mr. Justice Foster says—"the owner of the soil has *all above and un-*

der the ground, except only a passage for the King and his people." Thus far we quote the common law of England, and the opinions of her courts.

Judge Putnam, in giving the opinion of the court in the case of Stackpole & al vs. Healy, (vide Mass. Reports, vol. 16, pages 34, 35,) says—"I hold it to be clear that the public have no other right but that of passing and repassing; and that the title to the land, and all the profits to be derived from it, consistently with, and subject to the right of way, remain in the owner of the soil. The owner may maintain trespass for any injury to the soil, which is not incidental to the right of passage acquired by the people."

It is then given as the opinion of the court that "it is not lawful, therefore, for the public to put the cattle in the highway to graze. For whenever one would justify taking the property of another, in virtue of a license or a way, he must plead and prove that he used the way as a way, and not for any other purpose."—Judge P. then quotes the opinion of the English court as follows: If one drive a herd of cattle along the highway, where trees or wheat or any other kind of corn is growing, if one of the beasts take a parcel of the corn, if it be against the will of the driver he may well justify, for the law will intend that a man cannot govern them at all times as he would; *but if he permitted them &c., then it is otherwise.*"

Such then is the English common law in the matters of highways, and such are the opinions of her justices. Our statutes are in many instances very wisely based on those laws, and in accordance our learned chief justice Parker has given the opinion above cited. That such laws and such statutes are based on principles of strict justice to the public, who claim the right of way, and the individual through whose premises the way passes, cannot admit of a doubt. The public receive all they claim; all that can be of any service to them, in securing the right of travel and repair. They do not ask, as a public body, the right of pasturage, or of plowing and sowing or mowing. If they did, it would operate as an unequal right, which a part might enjoy, while others would have no oportunity or disposition to avail themselves of it. On the contrary, it is for the public convenience and public interest to leave this right of soil and its productions in the hands of the original proprietor, and further by good laws to protect him in that right. Where would the comfort or the safety of the traveller be, if all sorts of animals were allowed to run, indiscriminately, in our highways? Here, he might be exposed to the attack of a ferocious bull; there an unmanageable horse might blockade his path, and perhaps endanger his life. Many advocates of street pasturing, would no doubt say, keep *such* animals out, but let others run. But no. If our highways *are public pastures*, they have as good a right there as the innocent lamb. If they are pastures, they are pastures for every kind of farm stock. This is fully confirmed by the practice of the advocates of street feeding.

Street feeding is an encroachment on individual rights to an amount more than equivalent to all the benefits that can result from it. Many farmers would never on any consideration permit their animals to run at large. They choose, like thrifty men, to keep them in their own enclosures, where they are safe from the exposures to which animals running at large are liable, and where they are always sure to find them when needed. Such men are forever tormented by street cattle, which usually go in herds, and are forever picking quarrels with those in enclosures adjoining the highway—throwing down fences and teaching other cattle to do so, and fighting when the fences are down. Many a quiet and orderly stock has been made unruly, and of course of depreciated value, by evil associations with animals running at large.

But there are other wrongs to which individuals are subject, through this pernicious practice. Suppose for instance, (and it is a supposition which will hold good in a great majority of cases) that the farm of A. is situated so that a great proportion of his farm teaming is across the public way. In spring he wishes to haul his manure to fields opposite to his barns, one of two things must be done: the bars must be put up, or the gates opened and shut on each side of the way, every time he passes, or his fields must be trodden up by herds of marauders, wandering about like the prince of darkness "seeking whom they may devour." In summer, the season of busy cares, when earth is pouring her treasures into the storehouse and granary, the same scene of opening and shutting must be passed through again, only twice at each gate for every load of hay or grain that is moved to the barn. Now, is not this a pretty item of labor in the hurry of haying and harvest?—And does the public, for whose benefit the farmer's fields are cut in twain, demand it? No; they only ask "*the right of travel and repair*," all these ceremonies of labor and toil must be gone through with to gratify the lawless desire of a grasping individual. Let animals be expelled from the highway, and bars may be out and gates open for the prosecution of the business of the farm from morning till night, or from spring to autumn, with nothing to molest or make afraid for the safety to crops. And now, brother farmers, we leave it for you to say whether such a state of things is desirable in the prosecution of your daily employments.—For ourselves, we have lived under the dispensation of cattle going at large, and now live under the brighter one of having them enclosed, and found the difference in favor of the latter too great for our expression. *Try it*, and you will say likewise, and your neighbors who may not at the first like it so well, will, after a fair trial, give a response to your sentiments.

But to the text—How it can be done? In the first place get a draft of the law of Massachusetts in this matter. It is as perfect as a law can be, and so plain that a fool cannot mistake its meaning, (though perverse and obstinate men may sometimes give it a perverse translation) and send petitions, many or few as circumstances may permit, to your legislature, and ask that a statute in its very letter may be entered upon your own book. If they refuse to do this, give them leave *to stay at home as unfaithful servants of the people, in all future time, as the reward of their short comings in protecting the people's rights*, and try again, and continue *to try* until the thing is accomplished. It will soon be done, and in the end will compensate in more than a hundred fold for all the labor its accomplishment will cost. Get such a law passed, we say, farmers, for ye are the people and can do it, in every state in the union, and you will realize in one particular, the pleasure of sitting under your "own vine and fig-tree," and will entail a protective statute on posterity, of more value to them than all the protective tariffs that a nation of Congresses ever would impose. W. BACON. *Elmwood, July* 1848.

KILLING ANIMALS IN THE NIGHT.—DUMAS states that animals killed towards the middle of the night furnish meats which are more readily preserved, than do those which are slaughtered in the day-time. This seems to indicate that the meat most suitable for preservation, is that which is taken from the animal when its respiration is least developed, and its temperature is at the lowest point. The flesh of animals when killed after a long run is unfit for keeping, and this is considered a proof that a quickened respiration and a highly developed temperature are conditions unfavorable to its preservation.

NEW PATENT CLEVIS.

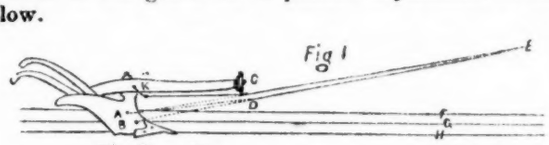
Messrs. Editors—Permit me, through the medium of the Cultivator, to introduce to notice an improved clevis with a few remarks on the draft of that most important implement, the Plow.

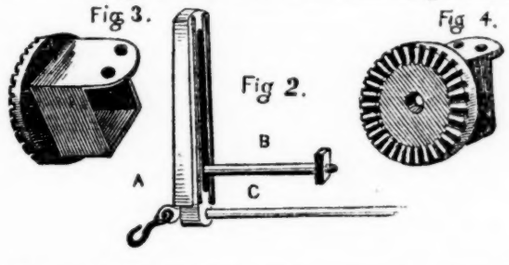
Although the plow is one of the most common implements, it is not using too strong language to say it is at the same time the most complicated of all farming tools and machines, and whoever is capable of making a plow-pattern of good form and proportion, as to its strength, weight, draft, and which is effectual in its operation, is no ordinary mechanic.

Again, after the pattern-maker has done his part properly, nearly as much depends upon the skill of the person who stocks or woods the implement; as the farmer too well knows by experience, who may have had the wood-work of a plow repaired or renewed, and afterwards found it another plow in operation, sometimes, it may be, for the better, and at others, perhaps, useless.

But supposing the patterns and the wood-work to have been made properly for a certain width and depth of furrow slice for two horses; the same plow, with a larger or less furrow slice, or perhaps with three horses, would become comparatively, if not entirely useless, without an adjustable clevis or fixture at the end of the beam.

The clevis in general use for a team of two horses or one yoke of oxen, is capable of being varied only to the extent of the size or square of the end of the beam, while for three horses abreast, or when it is desired to work the team on the solid ground, and not in the furrow, the Scotch clevis (so called) is in extensive use, and is one of the best modes of regulating the working of the plow. It is, however, an expensive part of the plow, if properly made, and is not unusually heavy and cumbrous, and the difference of its variaiton is too great for a perfect adjustment of the plow.





To more fully explain the engravings, I would first say, that all plows when in operation have a right line of draft, (often miss-called a "centre of draft,") and which may be described as follows. It is an imaginary line from the centre of resistance upon the mouldboard to the point of motive power, as the hames of the horses, staple-ring in the yoke, with oxen. This point upon the mould-board would be a little below the surface of the ground being plowed, and towards the forward part of the same, as for instance in fig. 1—let the line H. represent the bottom of the furrow, and the line F. the surface of the ground being plowed; then this centre of resistance would fall near the point on the mould-board, at A, and the point of motive power being at E., the line of draft would be from A. to E.; and in order to preserve the line of draft, the power should be applied to the plow as represented at C. But if the depth of furrow be changed, and the line H. remain the bottom of the furrow, and the line G. the surface of the ground, the centre of resistance would necessarily be lower in the mould-board, or as represented at B; the line of draft, consequently, would be changed and pass below the former point at C., so that it becomes necessary to change the clevis and attach the power at the point D, to insure the proper working of the plow. The above cut shows only the changes for regulating the depth, but the same rule holds true with regard to the width of furrow, or the position of the team, length of the traces or chain, &c., &c.

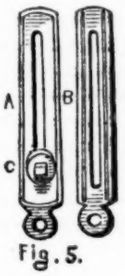


Fig. 5.

The improved and new clevis is shown in Fig. 1, attached to the plow, and is formed by a circular cast-iron face-plate, with a course of projections like small cogs near its circumference as shown in Fig. 4—and a bolt-hole through its centre, and the back so formed with flanges as to form a square box or cap just the size of the end of the plow-beam, as shown detached in Figs. 3 and 4. This "dial-cap" is confined on the end of the beam, across this, is confined a moveable iron plate or guide, 10 or 12 inches long, with a long slot or aperture through the middle, and an eye or hole through one end of it; and on one side it has two small ribs running its whole length, and which when placed against the dial plate, fit into the cogs of the dial. This plate or guide is shown at Fig. 5, A being the front, and B the back of it.

This plate is confined to the dial by means of a bolt passing through the slot and through the centre hole in the dial, and extending into the end of the beam several inches, and into an iron nut which is fitted in from the under side of the beam, the bolt and nut is shown at B, fig. 2. The head of this bolt is square, and is turned by a common wrench. It is shown at C, in fig. 5.

The plow is drawn by means of a rod which is attached by one end to the beam near the coulter, or at K in fig. 1. This rod extends along under, or by the side of the beam, and through the hole in one end of the iron guide at the fore end of the beam—this end or rod terminates in a hook or link, as at A, fig. 2.

Therefore, all that is necessary to change the clevis and to preserve the line of draft under different circumstances, is to loosen the bolt at the end of the beam, and move the guide in any direction, and any distance by means of the slot, and tighten the bolt again with the support of the cogs, which makes the whole firm. Its principal advantages are, the small expense of it—as it is put on any plow complete, in place of a common clevis, at fifty cents—its lightness and strength, being never broken by the hardest usage. By the use of the draft-rod, the beam is greatly relieved and is seldom broken, and the variations can be made to any degree of nicety.

This clevis was patented by J. M. C. Armsby, of Massachusetts, in December, 1845, since which time several thousands have been sold and used on plows, and with entire satisfaction. Several patent clevises have been offered about the country, and recommended very highly; but from my own observation and ten years' experience in manufacturing and selling plows, I have not seen one so simple, cheap and perfect as that above described. Horace L. Emery

Albany, July, 1848.

GUENON'S TREATISE ON MILCH COWS.

The subject of this work is noticed in the Report of the Commissioner of Patents. It is observed, (p. 206) that according to a recent report by M. Yvart, to the central convention of Agriculture in Paris, the following appears to be the present state of this alleged discovery:

"It is admitted that there is some general correspondence, as respects cows, but the signs are deficient as to the male animals. The classification which M. Guenon has proposed, is altogether too minute and extensive to be of practical value, as the pretended distinctions of the subdivisions are not verified on examination."

Since the publication of this work in this country, I have devoted some attention to the theory it embraces, and have come to the following conclusions, viz: 1. That a majority of cows have marks similar to what Guenon describes as "escutcheons," and that where these are found, there is a correspondence with his rules, so far as regards the leading qualities; that is, where the animals are kept under the same circumstances, those which have the marks of the first or highest class and order, gives the most milk, and those having the marks of the lowest, give the least. 2. That there are many cows that have none of Guenon's "escutcheons," and among them are frequently found those of the highest milking qualities; to such the rules can have no reference whatever. 3. That the theory claims *too much*, even in respect to those cows to which it is at all applicable; because it pretends to state the *precise* quantity of milk given by cows of each of the classes and orders, and the *exact* time they will continue in milk after having calved; whereas it is evident that the milking property depends in so great a degree on the quantity and quality of the food eaten by the animals, the care bestowed, and all the circumstances in which they are placed, that any external marks can be only indications of general qualities.

But there are other objections to the system of Guenon. It proposes to select and breed animals with exclusive regard to a single quality—that of giving a large quantity of milk—it notices only the points supposed to denote this, and overlooks others which are essential to constitute the most profitable animal, even for the dairy. A coarse, large-boned, weak-constitutioned cow, may, when full fed, without regard to expense, give a large quantity of milk; but this by no means proves that she is a good animal. Such cows are known to be enormous consumers, and to require extra attention in feeding and sheltering; and though they may, when supplied with good food to an unlimited degree, show the largest yield at the pail, yet when placed in a poor or rugged pasture, with ordinary exposure, a cow of proper proportions and muscular vigor, would yield a more valuable product. Besides, as *breeders*, animals of coarse bone and poor constitution are not to be encouraged—their tendency to various diseases, and general defects, is often manifested in an increased degree in their progeny, till the stock from their loose frames, unwieldy carcases and unhealthy habits, is rendered actually worthless.

The selection of sheep, for breeders, that possess the greatest possible fineness of wool, to the sacrifice of hardiness of constitution and other properties essential to *profit*, has been found injudicious; and so it will prove in selecting cows *solely* for the quantity of milk they may give. The properties of the dairy should certainly be secured, but the proper form and constitution should be added also.

Again, it is an error to suppose that the quantity of milk yielded by a cow is a criterion of her value for ordinary dairy purposes—it does not show what would be the amount or value of the butter or cheese she may yield; so that if Guenon's system were correct, the object sought for, (the most *valuable* cow,) could not be obtained, except in cases where the *quality* of milk was not regarded. It is admitted that in the preliminaries to his tables of "escutcheons," it is said that the quality of milk can be foretold, yet no signs are laid down for this purpose, and the tables and rules only refer to the quantity—to the number of "*litres*" of milk the cows of the different classes and orders will give.

It is a system, therefore, which at the best could only be adapted to those who *sell* milk with whom quantity is, of course, the only object.

A reference to those cows which have been the most remarkable for the production of butter, will support the remark that the quantity of milk is not a proper criterion of value in such cases.

The most extraordinary production of butter of which we have any account, is that by the "Cramp cow," so called, owned in Sussex, England. For five years this cow yielded an average of 545 pounds of butter per year, and in one year, (1807,) she produced 675 pounds. The greatest quantity of milk given by this cow in any one day, was twenty quarts, and the greatest quantity of butter produced in a week was eighteen pounds.

The celebrated "Oaks cow," which was owned in Massachusetts, yielded for three years an average of 394 pounds of butter per year, and in one year, (1816) she produced 484¼ pounds. The greatest quantity of milk given by her in one day, was eighteen quarts, (beer measure.) While this cow was owned by Hon. Mr. Quincy, he states that on several trials, five quarts of her milk afforded a pound of butter.

Now, cows are sometimes heard of which give from thirty to forty quarts of milk per day; but can any such product of butter as is above given, be shown from them? On the other hand, is it not a fact that the milk of such cows is generally deficient in the butyraceous quality, and that the butter it yields is often of loose consistence and inferior flavor? A Dairyman.

A Profitable Speech.—A correspondent of the *Farmer's Cabinet*, says that after hearing an excellent speech from Dr. Darlington, before the Philadelphia Agricultural Society, on the proper use and care of implements, he was induced to make such useful repairs, provide a tool-house, and keep his implements in so much better order than before, that "he calculates his savings in wear and tear of tools, since the delivery of that speech, has not been less than $50 per annum; while the time gained by having everything in its place, was worth as much more"—adding $100 a year to his income.

New use of India Rubber.—A stratum of India rubber placed under the rails of railroads, is found to prevent in a great measure, the jar experienced when passing in cars over ordinary railroads. Would not a layer of the rubber between the hoof and shoe of a horse, be useful in preventing concussions which so much injure the animal when driven on pavements or hard roads?

A DISCOURSE ON AGRICULTURE.

We are indebted to Dr. Wm. Darlington, for a copy of an address delivered by him at a meeting of the citizens of Oxford and vicinity, Chester county, Penn., assembled for the purpose of forming an agricultural society.

The principal objects of the speaker were to demonstrate the usefulness of *associated* labor and intelligence, and to show the necessity of a knowledge of the principles which are involved in the practice of agriculture. His observations on these points are given with much force, and we think the following extracts will be read with interest and advantage:

"Man, is by nature, a gregarious animal,—and evidently intended for the performance of mutual good offices. Even in his rudest condition, he soon learns the importance of co-operation with his fellows in producing desired results: and as he advances in civilization and refinement, he discovers that the benefits to be derived from combined skill and energy are in a direct ratio with his progress in improvement. The developments of Science not only excite a salutary emulation among individuals,—but they also show how much more may be accomplished by a concentration of effort—by a skillful union, and concert, of individual talent and energy. Hence the resort to *Societies*, for the promotion of desirable objects. By a judicious combination of their several means, and capacities, in the mode best suited to render them all available, men have accomplished purposes which, *individually*, they could never hope to perform.

"Associated efforts having been found thus valuable, in all great works of Art, requiring skill and force—and in the prosecution of researches after Scientific Truth,—the inquiry is naturally suggested, why the important business of *Agriculture* may not, also, be benefitted by a resort to similar expedients. Is there no sort of knowledge involved in successful Agriculture, which may be reciprocated, with good effect, among the members of a Society—or promoted by a generous co-operation? Is there no scientific or practical skill requisite, in the amelioration of soils—the culture of plants—or the management of stock—which may be advantageously imparted by the experienced, for the benefit of young beginners? If there are truths in Nature, which farmers are interested to know—or processes in Art, wherein dexterity and economy are desirable,—can any good reason be assigned why the cultivators of the soil should not associate, to secure to themselves those advantages? It may, perhaps, be alleged,—for the unreflecting do often make such random allegations,—that Agriculture is essentially a *practical* Profession; and therefore has little occasion for artistical skill, or scientific accomplishments. I am prepared to admit all that can be fairly urged in behalf of sound experience, and plain practical common sense—not only in Agriculture, but—in all human pursuits. I grant that the cultivation of the soil is eminently a matter-of-fact business. It is true, moreover, that the veriest clod-poll in the land may pursue the beaten track of his annual labors with tolerable success,—and may gather in his crops with little more knowledge, of the objects around him, than is possessed by the cattle he drives: But I can never believe that *true knowledge* is injurious to the operatives, or to the interests, of any profession, or business;—nor can I be persuaded that boorish ignorance is the proper condition and character of a thorough-bred Agriculturist. Most assuredly, it is not the appropriate character of an American Farmer. While I not only agree, but would insist, that a sound *practical* knowledge of their profession should be the primary object of the cultivators of the soil,—I must, at the same time, contend for the feasibility and necessity—in the existing state of society, and under Institutions like ours—of an adequate acquaintance with the laws of nature, and with the properties and true character of the objects immediately concerned in Agriculture. That acquaintance, of course, should be based on correct scientific principles,—so as to be always available when applied to the useful purposes of life. I hold it, indeed, to be essential to the safety and duration of this Republic, that our *Yeomanry* should keep pace with the march of general intelligence. As they value their just rights, and would cherish the attributes of Freemen, they must take care that their attainments never lag behind the age in which they live,—nor they, themselves, become unfit to mingle, and to struggle, with the master spirits who, for good or for evil, are ever seeking to direct the course and control the progress of communities.—*Agriculturists* being a majority of this nation, it is perfectly obvious that they must be either the intelligent regulators of its glorious career,—or the blind instruments of its destiny in the hands of artful Demagogues; and consequently they will be held responsible for the fate of the Republic, by their remotest posterity.—Ought they not, then, to employ every means, and exert every nerve, to qualify themselves for the high duties thus devolved upon them?

"There is nothing unreasonable, nor extraordinary, in the acquirements thus indicated as appropriate and indispensable to the *American Farmer*. In a nation fitted for Freedom—or which hopes to continue free—such attainments are enjoined upon all classes and descriptions of the People. Where men stand unfettered on the platform of equal rights, it is justly expected of every one, that he shall qualify himself to meet all the responsibilities belonging to his station in society: and this is eminently true of the particular business to which he is devoted. The remark is as correct as it is pointed and forcible, that "where knowledge is a duty, ignorance is a crime." No man should be held excusable for neglecting the opportunity to inform himself of that which it is his interest and his duty to know. *Professional men*, so termed, are bound to be familiar with the entire history, and with every department, of their several callings. The *Jurist* must make himself acquainted with the intellectual processes whence our present *rule of action* has been deduced,—in order that he may correctly apply that rule to all cases of difficulty between man and man. The *Physician* is required to know the structure of the human body, and to understand the laws of the animal economy,—so that he may avail himself of that knowledge, when called upon to relieve the various "ills that flesh is hair to:" And the *Divine*, also—whose sacred office it is to minister to our spiritual wants,—to expound the objects of our probationary existence here, and "vindicate the ways of God to man,"—even he is expected to furnish "a reason for the faith that is in him." *Artists* and operatives of every description, who would adorn their several pursuits, find it necessary to understand the *theory*, or principles, involved in their manipulations,—as well as to become expert in the practical details.—Such being the unquestionable fact, in reference to all other vocations,—it may well be demanded, why the business of *Agriculture*—itself a comprehensive system

of Natural Science, involving more or less an acquaintance with all physical laws, and all terrestrial phenomena—and being moreover the great substratum and support of every other human pursuit,—*why should Agriculture, alone*, of all earthly employments, be regarded as calling for no scientific attainments—no intelligent observation of the varied natural objects, the interesting facts, and curious processes, around us: in other words—no rational exercise of the intellectual faculties with which a beneficent Creator has endowed us? It was, indeed, wisely provided, that an art to which the whole human family is indebted for sustenance, should be so simple in its essential features, that even stupidity can make a living, and mere muscular energy be profitably employed, in its prosecution: But, in the nature of things, it cannot be, that a business involving so much of Natural History—and controlled by so many of the laws indelibly impressed upon matter,—it can never be predicated of such a pursuit, that a knowledge of its true principles is superfluous—nor that its best interest may not be promoted by a cultivated intellect. I shall therefore assume, as an established position, that a knowledge of the Profession, *in all its relations*, is requisite to ensure the perfection of Agriculture, and to elevate it to its proper rank: and moreover, that in a country where Laws rule, and Yeomanry have a potential voice in their enactment, it is indispensable to the perpetuity of their Institutions, that an Agricultural people should be an educated and an intelligent people.

"I would, therefore, exhort our young Farmers to acquire so much Natural Science as will enable them certainly to know, and to discriminate between, the more important objects of their daily care and attention,—and by means which they may also treat of those objects intelligently, and correctly, in their intercourse with others. They should be so far acquainted with *Geology*, and *Minerals*—and understand so much of *Chemistry* and its laws—as to have a general idea of the structure and stratification of the Earth's crust, and a just conception of the reciprocal influences exerted by the constituent portions of the soil, and the atmosphere. This information may now be readily obtained, from elementary works within the reach of every one who has the taste or the inclination to possess it: But, that all might have a fair and equal opportunity to profit by such knowledge, according to their several capacities, it should be made an indispensable branch of the education of Youth, and faithfully imparted, by competent teachers, to every child in the Republic. Until such instruction shall be provided, it may be confidently maintained, that no better substitute can be devised, than is afforded by the intercourse of intelligent, public spirited men, in well-conducted *Associations*.

"Similar remarks may be applied to the expediency of a reasonable acquaintance with the *Vegetable*, and the *Animal* kingdoms. What sort of an Agriculturist is he—in this age, and country—who is so ignorant of the interesting *Plants*, on his own farm, as to be continually overlooking the most pernicious weeds, when they invade his premises—or mistaking, for them, those of a comparatively harmless character;—and who knows so little, even of those he annually cultivates, as to be unable to designate them by a name that is certainly comprehended, beyond the limits of his native parish? Is the young American Farmer, who can rest contented with such imperfect intelligence in his immediate Profession,—is *he* calculated—in this progressive era—to advance the interests, or maintain the appropriate rank, of that first, and noblest, and most indispensable of secular employments? Surely, it ought not to be thus with *Agriculture*—when all the kindred Sciences are going ahead with rail-road velocity. The several departments of knowledge are auxiliary to each other. They reciprocate lights, by which their obscurest truths are illustrated. They should, therefore, all proceed with equal step. It is not necessary—neither would it be expedient—for the practical Farmer to spend his time in studying the unimportant species of the vegetable creation,—nor in tracing the distinctive features of all the various tribes—"from the cedar tree that is in Lebanon, even unto the hyssop that springeth out of the wall": But, as his business is especially with the more interesting kinds—with the *culture of useful plants*, and the *extirpation of pernicious weeds*, I hold it to be his duty to acquire a knowledge of *these;* and such a knowledge, too, as shall be adequate, both to the proper management of them, and to the delineation, when called for, of their true botanical character. This would be a limited task, and an easy attainment,—quite within the reach of every ordinary capacity.—Some three or four hundred species, comprise all the more important plants usually observable on our farms—whether in the forest, the fields, or the kitchen-garden; and it must be an obtuse intellect, indeed, which cannot learn to know and distinguish that number of vegetable forms. The juvenile pupils of some of our Female Seminaries are, every year, demonstrating the facility with which the task may be performed.

"I shall not detain you with observations concerning the importance of *Zoological* information; for *that* is a kind of knowledge so intimately connected with our prosperity and comfort, that we cannot well avoid the acquisition of a reasonable share,—at least, with reference to the larger animals which are domesticated, or indispensable on the farm. Our daily habits and associations force the attainment on us all. The rudest bumpkin that ever trampled on flowers—or worked among weeds, without being able to distinguish one from another,—is nevertheless compelled to become acquainted, in some degree, with both the valuable and the mischievous animals,—fowls, as well as quadrupeds: indeed, it is wonderful to observe how well, and thoroughly, such untutored persons do often learn the distinguishing traits—the dispositions, and the characteristic peculiarities—of animated nature. Still, there is a *scientific aspect*, of which every department of Natural History is susceptible,—under which it assumes a methodical perspicuity—an illustrative arrangement—which is exceedingly gratifying, as well as instructive,—and merits the attention of all inquiring minds. There is, moreover, a *branch* of Zoology,—embracing myriads of tiny creatures—and many of them of the most destructive character to the hopes of the Farmer, which is yet imperfectly understood, and demands the closest scrutiny of every one concerned in the products of the vegetable kingdom. I refer, of course, to the multitudinous *Insect* tribes;—some of which are occasionally so injurious as to spread dismay throughout whole nations,—and, at the same time, of habits so obscure as to require the most patient observation, and the utmost sagacity, to ascertain their true history.—Even these minute researches—too generally neglected or despised—are demanded by the best interests of Agriculture;—and to be successful, they must be conducted on scientific principles. A little mental discipline, however—backed by perseverance—will soon enable the curious observer of Nature to make valuable contributions to the common stock of information. I would therefore have every *American Farmer*, who can appreciate the responsibilities of his position, to cultivate his intellect with the same care and assiduity that he does his acres. Let him habituate himself to note the facts—to observe the phenomena—and to investigate the theory of the processes—which are continually taking place around him: and let no one delude himself into the belief—nor seek to excuse his deficiencies by the stale and hackneyed plea—that he has not *time* for such

pursuits. Why, those very pursuits are part and parcel—a very important part, too—of his own appropriate business. It is precisely for such business that his *time* is allotted to him. At this day, and in this land, it will not do, to urge the want, either of time or opportunity, for the due performance of our parts in life. Most people contrive to find time for what they really wish to do; and if driven to the necessity, are apt to *take* it, at any rate, for those pursuits which they are resolved upon. But the fact is, we all idle away, or waste in frivolous amusements, more time than would be requisite to fit us for the performance of our several duties. We are very prone to mistake the real nature of our *wants*. It is not so much to the *want of time*, as to the *want of inclination*, and of a proper sense of our responsibilities, that we should attribute our failure to possess the accomplishments which justly pertain to our Profession and station in society. It is *this want* —this neglect of the more elevated attainments, and this lack of a just perception of the beautiful—which has, hitherto, been most striking and conspicuous among the Agriculturists of our country. While our Farmers have generally attended—faithfully and successfully—to what is familiarly and truly denominated "the main chance,"—it must be confessed that too many among them have exhibited a lamentable want of tact and skill in planning and improving,—or in availing themselves of natural advantages, in the arrangement of their rural establishments.

"Next in importance to successful culture, and a correct knowledge of the objects and principles involved in the process, is the attainment known as good *Taste*,—or that refined sense of the beauties of Nature, which knows how to appropriate her charms, in the embellishment of farm-houses, or cottages—and to invest them with that witchery and grace which should ever be associated with a country residence. No person, who has enjoyed the delights of a tasteful rustic dwelling—embosomed among venerable trees, and reposing amid the verdure of flower-spangled lawns,—can fail to be shocked at the contrast of a rude vulgar-looking tenement, awkwardly stuck in some open weed-grown space, without a shade tree, or an enclosure, to protect it from the rays of a burning sun, or the annoying approaches of the trampling cattle: and yet the difference may be entirely owing to the exercise of a cultivated taste in the one case, and a total destitution of it in the other. *Fruit trees*, and *Shade trees*, should be regarded as indispensable appendages of every human residence. If duly attended to, the former will amply gratify the palate,—while the latter will also minister to our enjoyment—directly, by the refreshing shelter afforded to ourselves—and indirectly, by attracting to their branches the lovely Serenaders of the feathered race. How delightful, in a tree-embowered cottage, to be roused from our slumbers by the gushing melodies, which, in such abodes, ever greet the dawn of a summer morning! By providing a shady retreat for the little warblers—and protecting them from the weapons of reckless sportsmen—we not only secure their punctual attendance, with the grateful tribute of their vocal strains on each returning Spring,—but we are rewarded, tenfold, for all such benevolent offices, by the industry with which the welcome visitors labor to rid us of annoying and destrtctive Insects. It should, therefore, be the business and the pleasure of the intelligent Farmer—wherever located—thus to improve and adorn his premises."

DOVE-COTE AND RABBITRY.

In reference to the request of a Mississippi correspondent, to furnish a plan of a pigeon-house, we give the engraving on the next page, which is designed for both pigeons and rabbits.*

Pigeons are not at all particular in regard to their shelter or breeding-places. Any box, nailed against the wall of a barn or other building, with holes for ingress and egress, will satisfy them. Even shelves, placed around the inside of some out-house, will answer every necessary purpose. But when it is designed to render these birds as much as possible an ornament to the homestead, more sightly and tasteful habitations are provided.

If several varieties of poultry are to be kept, a separate house will be found most suitable; it should, of course, be divided into the requisite apartments for the accommodation of the different kinds, and the dove-cote may be placed on the top—surmounting the roof in the form of a cupola. This plan, if perfectly carried out, makes a complete *aviary*, which, if properly situated, adds greatly to the beauty of a country residence. There are, however, comparatively few people who live in the country, and may wish to keep pigeons, who can afford the expense of so costly an establishment.

A cheap and rather ornamental dove-cote, may be made of an empty cask raised on a pole. It may be a barrel or a hogshead, according to the number of birds to be accommodated. If a hogshead, it may be divided into three stories and partitioned off for separate nests. This makes a pretty and convenient house for a small number of pigeons. The chief objection to it is, it is difficult to clean. In this respect the following plan, which we have seen adopted, is preferable:

A small square house is erected on four poles. Rows or tiers of boxes for nests, are arranged on three sides of the house. A space is left in the centre, large enough for a person to enter and clean the boxes, which should be accessible for this purpose. The space should be closed by a door; the building to be reached by a ladder.

Boxes for nests should be about eighteen inches square on the bottom, and about a foot in height. For holding the nests, cheap wicker baskets, or small earthen pans may be used. The pans may be three inches deep, eight inches over at the top, sloping to the bottom. Some fine soft hay, put in the baskets or pans, will save the pigeons the trouble of carrying in the materials for nests. The boxes should be frequently cleaned, as the accumulation of filth is unfavorable to the health of the birds.

In the plan illustrated by our cut, the pigeon-house is, as before observed, placed over a rabbit-warren,—the combination forming an ornamental structure,—which, if placed on an island, handsomely planted with trees, in the centre of a sheet of water, adds a highly picturesque feature to the scenery.

The area, surrounded by palings, is abont twelve feet in diameter. The inside is excavated to the depth of two or three feet, forming a pit in which the rabbits are kept. The top is thatched, as giving a more rustic air than any other kind of roof. The posts and chain are designed as a protection of the enclosure

*The cut is taken from an English work, entitled "Farming for Ladies."

Dove-Cote and Rabbitry.

against cattle and horses. It does not appear, however, that any excavation is necessary—the rabbits will probably do quite as well if kept on the surface.

But rabbits are more commonly kept in huts or "hutches." In regard to the mode of making these, and the general management of the animals, we copy the following from the "Farming for Ladies:"

"The breeding hutch, as being the habitation of the doe, is always the larger and contains a double apartment—one for the nest, and the other for the feeding room of the young, when old enough to come into it. The best size is about four feet long by two and a-half feet wide, and eighteen inches to two feet high; but they are often made smaller, and those not meant for breeding, are seldom more than two-thirds that size. They are latticed with wire in the front of each, as, if made of laths, the rabbits would gnaw them; but the division parted off for the reception of the breeding nest, is closed both at the front and sides, leaving only a small door in the interior for the entrance of the doe: indeed an inner division with a sliding door is used for confining the rabbits while the outer part is cleaned. There should also be a moveable feeding trough, which should be regularly taken away after every meal; for rabbits, like horses, if allowed to blow upon their food will not afterwards eat it, unless pressed by serious hunger. The troughs should be made of tin or iron, to allow of their being easily cleaned; and should have separate compartments, of not more than four inches long, both for different sorts of food, as well as to prevent the rabbits from getting their feet into the trough and throwing out their corn. Some persons even add a small rack at one end of the hutch, for the purpose of containing the hay on which they feed; but the small quantity usually given, is more commonly left on the floor. The trough should be either inserted as a drawer, or if placed outside, the hutch should be covered by a hinged flap to shut and open, in either the front or one end. The floor is commonly pierced with holes to allow the escape of the urine; but, as the greatest attention is necessary to be observed in the cleansing, it is a good plan to have a false bottom, which may be drawn out like that of a bird cage, for the removal of the excrement, and ought to be every morning scraped and strewed with a little sand, or, in cold weather, covered slightly with refuse hay; for rabbits will never thrive unless kept dry and clean."

"Hutches of this description, well made and of good material, will not cost more than from eight to ten or twelve shillings, [two to three dollars,] according to their size. Any carpenter or joiner can make them with these directions, and we have lately seen one of the largest size, in every respect well fitted for breeding, the price of which was half a guinea—[about $2.50.]

"The hutches if numerous, may be placed over each other, and are sometimes ranged round an outhouse kept for that purpose; but is seldom necessary for small families, and the better way is to put them upon a stand in the open air against some sheltered wall, for a too confined atmosphere is not natural to them, and if kept in a close room they emit a faint and unpleasant odor. The hutch should, however, be covered at night, as cold will prevent them from breeding in the depth of winter."

In this country, rabbits are chiefly kept as objects of amusement, but in England they are reared for their flesh, and large numbers of them are sold in the markets. Their flesh, especially when young, is well tasted and wholesome; for invalids it is considered equally as proper as that of fowls. They are generally killed "from the teat," while they are from four to six weeks old. They weigh at that age, if well fed, from two to three pounds, "trussed for the table."

There are several varieties, some of which are highly prized by fanciers. Some are very large, reaching the weight of ten to twelve pounds, or more, dressed; and when castrated and well fed have been known to weigh fifteen pounds each. Mowbray speaks of "a very large variety, of the hare color, having much bone, length and depth of carcass, large and long ears, with large eyes, resembling those of the hare. They might" (he says,) "well be taken for hybrids or mules, but for the objection of their breeding. Their flesh is high colored, substantial, and more savory than that of the common rabbit; and they make a good dish cooked like the hare, which, at six or eight months old they nearly equal in size." We have seen a few of this variety—they are fine-looking animals. There is another very large variety, chiefly of a yellowish brown color, with lop ears of enormous length. It is said that the ears of one of this variety, which gained a prize from a fancy "Rabbit Club" in London, measured across the head, from the tip of one ear to the outer edge of the other 20¼ inches. These are sometimes called Spanish rabbits.

But a writer who appears to understand the subject, observes—"For common use we believe the large grey rabbit to be the best, though the black and white seem to be the favorites among amateur breeders; but any sort will do for the hutches, provided they be healthy, of good size, short-legged, and broad in the loin."

The proper food for rabbits is oats, peas, wheat, buck-wheat, Indian corn, with potatoes, turneps, and clover or lucerne, in summer, and nice, well-cured clover hay in winter. They are similar in constitution and habits of feeding to sheep, and like them are liable to injury, such as diseases of the liver from eating largely of succulent food. Mowbray directs that they be fed regularly three times a day, with such quantity as they will eat up clean.

Wire Worm.—C. W. Johnson details an experiment, where, on a 50 acre field sown with wheat, half an acre was preceded by a crop of white mustard. This half acre was wholly exempt from the wire worm—the rest of the field was much injured. Another field of 42 acres, so much infested with the wire worm, that nearly every crop for nineteen years was largely destroyed by this insect, was then wholly sown with white mustard. The following year not a wire worm could be found. He therefore concludes, that by destroying all weeds and roots, and by a careful and clean drill culture of the white mustard, the wire worm may be expelled.

The Steam Engine.—It is estimated that steam power effects in England a saving of as much labor as could be done by three hundred millions of men.

IMPROVEMENT OF SANDY AND GRAVELLY SOILS.

Mr. ADAM ANTHONY, of North Providence, furnishes the officers of the Rhode-Island Society for the Encouragement of Domestic Industry, an account of the mode in which he has very successfully improved his farm. The farm consists of 150 acres, but deducting 50 acres of wood, 18 in a "natural pasture," and 10 in wet meadow, there is but 72 acres suitable for tillage or hoed crops. The principal portion of these 72 acres, is "very sandy, with a subsoil of sand and gravel," and was originally very poor. Mr. A. took possession of the farm in 1826. "The crops of that year, were 5 tons of English hay, 3 of bog hay, 2 of oats, 200 bushels potatoes, 200 of turneps, some fruit and a supply of garden vegetables for home consumption—worth, including pasture feed $385. The produce of the farm last year, (1847,) was by estimation, 200 tons of green fodder for soiling, 100 of hay, 25 of millet, 17 of dry corn fodder, 640 bushels of potatoes, 750 bushels Indian corn, 50 bushels apples, with other fruit and garden vegetables—the value of which, inclusive of pasture feed, is $3.575. Nearly tenfold increase in the products of the farm."

Previous to 1826, the sandy portion of the farm had been put to Indian corn and rye, at intervals of about six years, and had yielded about eight bushels of corn, and about five bushels of rye per acre. The rye was sown on the corn-hills—no grass seed being ever sown. It was of so little value for grazing, that 75 acres, half in wood and half in pasture, rented in 1826 for $15. This same pasture produced last year, more than half the crops above named.

The basis of Mr. ANTHONY's improvement, has been the application of *leached ashes*. The products obtained by the use of ashes, afforded the means of keeping a larger stock and increasing the quantity of manure; the manure permitted the introduction of other crops, which being consumed on the farm, laid the foundation for larger yields and more extended cultivation. His first crops were clover and millet, and his mode of preparing the land was to plow "at first from four to six inches deep, turning the furrow flat when there has been tenacity enough for the purpose, followed by the roller, and if the field did not then present a surface sufficiently smooth for the reception of ashes and seed, the harrow, or bush, or both, as circumstances required, were applied. The ashes placed upon the field, in rows six paces apart—the heaps of uniform size, distance six paces in the row, and in the aggregate containing 200 bushels the acre, (the usual quantity first used on these poor soils) have then been evenly spread, and the field marked by drawing a chain into lands five paces wide in two directions, the last at right angles with the first. This done, the millet and clover seeds, previously mixed together and divided into two equal parts, were sown; one half in one direction of the field, and the remainder crosswise, or in the other. Two harrowings, the last across the first, succeeded by the roller, usually completing the operation."

The millet and the clover are both cut for hay; the first crops being about a ton and a half of hay, each, per acre. The third year after being sown, the land is again turned over, the plow running rather deeper than before, and the former course is repeated, with a somewhat less quantity of ashes than before. After a third repetition of this process, Indian corn and potatoes are brought in; these crops always receiving a dressing of manure—from six to nine cords per acre. For Indian corn, the stable or yard manure is always plowed in, the plow running from six to seven inches deep, followed by a roller, to prevent the disturbance of the sod in the after culture. [It should be remembered that this is a very loose soil, and needs compression.]

Mr. A. prefers sowing millet early in June, but the time may vary according to circumstances, from the twentieth of May to the tenth of July. If sown earlier, the weeds obtain the ascendancy; if later, the crop is liable to injury by frost. The quantity of seed is about forty quarts per acre. When grown of suitable fineness and well cured, Mr. A. considers it excellent fodder—better for soiling than most grasses, but inferior for this purpose to rye. Sandy soils produce it in greater perfection than any others; on heavy loams it is apt to rust. Mr. A. remarks that when clover seed is sown with millet, many of the young clover plants perish, and he recommends an extra quantity of seed on this account. He advises to omit sowing the grass seed till after the crop, whether of millet or any other kind of grain, is off; and he prefers stocking down in the last of August or beginning of September, to any other time. We will add, that we should prefer sowing clover at this time, to sowing it with millet or any spring crop, on such a soil as is here described.

Indian corn and rye are used for soiling. The corn "is drilled in rows 2½ feet apart, at different periods, for this purpose, and thus affording a successive supply. The seed used, from 2 to 2½ bushels the acre, covered with the hoe and dressed with the cultivator. The large sweet variety is esteemed the best on account of its superior richness, and the avidity with which it is eaten. It is, however, less productive than the flat or southern."

When rye is sown, "the land is stocked at the same time with clover for soiling, about the commencement of autumn, either on sward, clover lay or old ground, dressed with stable manure or ashes. The rye is commenced upon early in May, and the clover succeeds that of other fields when their produce has become too old to be relished. This is followed by millet. Next comes corn, the earliest drilled for the purpose. Afterwards suckers, and then again corn. This is all fed at the barn."

MANAGEMENT OF STOCK ON THE SOILING SYSTEM.—Mr. ANTHONY gives his mode of managing stock as follows:

"The stock, averaging about 40 head, stand upon a platform, raised six inches above a tight floor which projects beyond the sill a few inches over the side of a planked trench outside of the barn. Here the cows (usually 36 in number) are fed three times a day. They go also to the pasture for a slight picking, for water and exercise, morning and evening. But they are always stabled at night, and a sufficient supply of peat or swamp mud, is placed just below the platform for the reception of the urine and manure. After lying 24 hours, the whole mass is hauled over and shoved through an aperture between the floor and the boarding of the barn into the trench referred to. In this way, 300 cords of excellent manure are annually made by the stock. In the planting season it is carried to the field and plowed in, undergoing little or no fermentation until it is turned under or incorporated with the soil. At other times it is placed in large heaps, when it is to be used the ensuing season.

"For seven months in the year, the cows go out only once in the day, having an hour or more in fine wea-

ther for air, exercise and water. All of these purposes being regarded as very essential to their health and comfort. They are furnished with some slop in summer, but are much more liberally supplied at other seasons of the year, especially in winter. Shorts, meal of Indian corn, and oil meal constitute the slop referred to. The quantity fed to each cow is various, and when a large quantity of milk is desirable and practicable, the feed should be such as to neither increase nor diminish the flesh of the animal.

"Formerly it was my practice to change nearly all my stock annually. More recently about one half, (quite as large a proportion of the whole raised as is worth keeping) are allowed to bring calves. The remainder are milked until they are fit for the shambles, when they are sold and their places supplied by others.

"Ordinary keeping is not calculated, in my opinion, to develope the milking properties of the best cows. Those that I have purchased, have rarely given more than two-thirds the quantity of milk the first, as in subsequent seasons, the feed in both cases being the same. They should be in good condition at the time of calving, or generally with liberal feeding afterwards, their tendency will be to flesh rather than to milk."

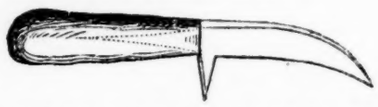
HORTICULTURAL DEPARTMENT.

CONDUCTED BY J. J. THOMAS.

Experiments in Grafting.

CONTACT OF BARK NOT ESSENTIAL.—It is well, but not absolutely necessary that the *bark* of the graft and stock should touch to insure success. A shoot that has been cut in season, will, if kept moist, throw out a woody substance at its lower end—this will fill the space between the graft and the stock. I have made the wedge of the graft so thin on the outside, that when placed in the stock, the bark of each did not approach nearer than the twelfth of an inch in any place—they were waxed and all grew, and were only a few days later in starting.

Grafting Wax.—The following proportions suit me best:—3 lbs. rosin, 1 lb. beeswax, 10 ozs. tallow,—melted together and well stirred while cooling; particularly the latter part—on this depends the light color which is essential to prevent heating by the sun's rays. When used, it may be softened in warm water, if otherwise too cold, the hands to be rubbed with lard to prevent sticking. In this way, it may be applied in the best manner and with great facility.



Grafting Knife.—The tool figured in the Feb. No. will not be likely to be used by such as set 4 or 500 in a day. If it answers as well (which I doubt) there is much picking up and laying down in using it. The knife here used (Fig. 6,) is merely a crooked one with a wedge for opening the stocks, made as part of the blade at right angles near the handle. A blow with a small mallet will split the stock, another under the point will withdraw it, the wedge is then driven to open the cleft, the graft put in and no time lost in changing tools.

In grafting apples and pears, the best success has attended those put in when the trees are in full bloom—of one lot of over 250 set at that period last spring, not one failed to grow. M. QUINBY, *Coxsackie, March*, 1848.

Remarks.—One who has never used the tool described in the second number of the Cultivator, cannot conceive of the ease and perfection of its work. Such is the facility with which it is used, that a hundred stocks may be headed down for grafting in the most perfect manner, in as many seconds; a perfectly smooth slit for the graft is made with equal facility, by a single motion of the hand; an iron wedge opens this slit; using the head of the tool as a small mallet; all with no more picking up and laying down, than the knife and mallet described by our correspondent, while the work is both more radid and more perfect. These remarks are founded on the experience of years, in the insertion of many thousands of grafts with this implement.

NEW MODE OF GRAFTING.—In some of the high winds, early in June last, I had some pear grafts broken off, which had been inserted a year before, and were of strong growth. Wishing to preserve the kind, it occurred to me that it was possible to do so by cutting off the short branches from the main branch, and using them as scions. These scions were from an inch to three inches in length, and were cut out of the main branch in the same way as in budding, and were grafted the same as in T budding; being carefully tied with matting. The stocks in which they were engrafted, were cut off a little above the place of insertion.

The result of this experiment has been highly satisfactory, for not one of the scions failed; but all commenced growing in ten or twelve days, and grew from two to three feet in the course of the season.

I have tried various other methods of grafting and budding, but never with as good success as in the manner here described. P. D. S. *Hartford, Ct., February*, 1846.

Destruction of fruit buds by Frost.

M. QUINBY of Coxsackie informs us, "For the last ten years, whenever the mercury has fallen more than eight degrees below zero during the winter, the fruit buds of our peaches have been invariably frozen to death; when it remained above that point we have always had fruit. Two years during that time, the coldest weather was exactly eight below zero; one year it killed all the fruit the other about half. Consequently that is about the last degree of cold the peach can endure. The fact can be ascertained that the fruit buds are killed any time in the winter after weather warm enough to take the frost out; the centre then turns black. On the 11th *January* the mercury was 21 deg. below zero. I expected to find peaches killed, but not cherries and plums, which appear to have shared the same fate. It has been suggested that cherries and plums would not have suffered, had it not been for the warm weather the first part of winter, starting the buds. How is it? Did the buds start, and were they killed by the subsequent cold; or is there a limit to their endurance of cold, as well as the peach?"

Our correspondent is referred to the remarks on p. 181 of the present volume of the Cultivator, showing that it is not low temperature alone which destroys fruit buds. Indeed the fact that the point at which they are killed is placed quite differently by different cultivators, proves this to be the case. When peach buds have been much swollen by warm weather in winter, we have known many of them destroyed at a temperature of only five degrees below zero, leaving how-

ever enough for a good crop. On the other hand, we are assured on good authority, that at Montreal crops of peaches have been obtained, after the thermometer had sunk as low as twenty-eight degrees below zero—not the slightest swelling of the buds having previously taken place, and the trees being merely protected from *sudden changes* by a thin mat.

Under *ordinary circumstances* however, in the peach districts of New-York and New England, it rarely happens that the crop escapes a frost of 12° or 15° below zero.

There is no doubt that the cherry and plum, like the peach, is rendered more liable to destruction by the previous swelling of the buds—we have known the entire cherry crop destroyed by cold only 12° below zero, when the previous winter weather had been quite warm

Vines on Forest Trees.

In travelling through the states of Massachusetts and Connecticut a few years since, I was drawn to observe the quantities of grapes growing wild on vines that were climbing over the tops of the forest trees;—most of those which I tasted were of good quality, and they grew in abundance without any care whatever.—I have often heard people from the above mentioned states, speak of the excellent grapes that they used to gather from vines on the forest trees. A few years since, a friend of mine took the trouble to collect a quantity of cuttings of the best varieties, which he planted in his garden. The vines when they grew were managed with much care, after the manner that Isabella and Catawba vines are, on open trellises.—The consequence was, very little fruit was produced, and that of a very poor quality; and as he thought he had done his best, he at lenth came to the conclusion that it was the change of location that had made such a wonderful change in the fruit. It happened that a few tendrils from one of the vines came in contact with the projecting limb of a plumb tree, and in a short time the shoots reached the top of the tree, and the next year the owner was gratified to see good fruit, and of as good flavor as any that he had ever tasted of the kind in their native place. In several instances I have known Isabella vines to run rampant over the tops of large trees, and they have never failed to produce large crops of grapes every year, of better quality than any that I have ever eaten grown on trellised vines, and without any labor being expended. There is one vine now growing in this town, that produces more grapes than any other six that are managed in the ordinary way; and what I wish to suggest is this: why cannot Isabella and Catawba grapes be raised to any extent throughout our whole country, on the tops of the scattering trees in the fields, and along the borders of wood-lands,and woody ravines, without any labor being expended or required, except in planting the vines, and training them up a permanent post set for that purpose? There should be three shoots fastened to the sides of the post, with loops of leather, until the beginning of March in the second year,at which time the number should be reduced to one, which is to make the trunk of the vine. It should be protected while it is small with stakes, to prevent injury by cattle or other animals. The vine needs the support of the post until the tendrils obtain permanent hold of the limbs of the tree, and the body attains sufficient size to withstand anything that may come against it. The vines should not be set near the body of the tree, because the ground is already occupied by the roots of the tree—but directly under the extremities of the branches on the south side, where the vine will receive the warmth of the sun. If the soil is not first rate, it should be taken away and replaced with at least one cart load of rich sods from the roadside, which is much better than any highly manured soil for the vine or any fruit tree. Much has been written on the management of vines, with many precise rules for pruining, training, manuring, &c., which all amounts to nothing with farmers generally, who have no time to devote to such work. All that our native vines want is plenty of space to extend over, and plenty of air and sun, all of which they receive perfectly if they are allowed to run over the tops of the trees. Another advantage in planting vines in the situations that I have described, is that they are rendered more lasting, and will produce fruit for several generations, judging from specimens that I have seen growing in different parts of our country. Writers compute the age of the vine at two hundred years, and they have been known to reach a much greater age; hence in planting a vine we are doing work that need not be repeated soon in the same place if properly done. I. HILDRETH. *Seneca, April 7, 1848.*

Destruction of the Rose-Bug.

In the November number of the Cultivator for 1847, W. L. Eaton, asks how he shall most effectually destroy the rose-bug, one of the greatest pests that we have at present among us. In answering this question it may be well to glance at the description, and habits, of this insect, as described by Dr. Harris, in his "Report on the Insects of Massachusetts."

The natural history of the rose-chafer, was for a long time involved in mystery, but is at last fully cleared up. The unexpected arrival of these insects in swarms, at their first coming, and their sudden disappearance, at the close of their career, are remarkable facts in their history. They come forth from the ground during the second week in June, and remain from 30 to 40 days. At the end of that period, the males become exhausted, fall to the ground, and perish; while the females enter the earth, deposit their eggs, return to the surface, and after lingering a few days, die also. The eggs laid by each female are about thirty in number, and are deposited from one to four inches beneath the surface of the soil; they are nearly globular, whitish, and about one-thirteith of an inch in diameter, and are hatched 20 days after they are laid. The grubs attain their full size in the autumn, being then nearly three-fourths of an inch long, and about one-eighth of an inch in diameter. They are of a yellowish-white color, with a tinge of blue toward the hinder extremity, which is thick and obtuse or rounded; a few short hairs are scattered on the surface of the body; there are six short legs, or a *pair* to each of the first three rings behind the head; the latter is covered with a horny shell of a pale rust color. In October they descend below the reach of frost, and pass the winter in a torpid state.—In spring they approach toward the surface, and each one forms for itself a little cell of an oval shape, by turning round a great many times, so as to compress the earth and make the inside of the cavity hard and smooth. Within this cell the grub is transformed to a pupa; during the month of May, by casting off its skin, which is pushed downwards in folds from the head to the tail. The pupa has somewhat the form of the perfected beetle; but it is of a yellowish white color, and its short stump-like wings, its antennæ, and its legs are folded upon the breast, and its whole body is enclosed in a thin film that maps each part seperately. During the month of June this filmy skin is rent, the enclosed beetle withdraws from its body and its limbs, bursts open its earthen cell, and digs its way to the surface of the ground. Such being the metamorphose and habits of these insects, it is evident that we cannot attack them in the *egg*, the *grub*, or the *pupa* state. The enemy, in these stages, is beyond our reach, but they must be either *crushed*, *scalded*, or *burned*, to deprive them of life, for they are not affected by any of the ap-

plications usually found destructive to other insects.—They should be collected *daily* during the period of their visitation, and should be committed to the flames or killed by scalding water.

It is not expected that we shall go into our *orchard* to collect these animals, but surely it is worth the trouble, to collect them in the garden, on the peach, the cherry, and the grape. The best instrument of destruction is an old warming-pan; fill it half full of live coals, and with a wing or your hand, brush or jar them into your pan: (this should be done in the cool of the morning.) In this way, with *patience* and *perseverance*, you will at least very much reduce the number; for every female you kill, you decrease the future number thirty fold. HAMPDEN. *Hampden Co., Mass.*

Management of Fruit Trees.

Almost any kind of upland may be prepared for an orchard. For the apple, the most natural soil is that which is well adapted to corn, and requires but little extra preparation.

The poorest upland soil for an orchard is perhaps moist heavy clay. This must be prepared by draining off all the superabundant surface water, which may be done by open ditches or under draining. Set the trees on the top of the ground without any excavation; but if suitable holes are dug, fill up with rich loam, and if convenient add a mixture of slate and small stones.—Haul on earth of a loose rich mixture, and bury the roots rather deeper than when set in the usual way.—The failure of nearly all kinds of trees set in a stiff clay may be attributed in part to planting them too deep.—The holes prepared for the trees, form basins to receive the surplus water, which literally drowns them out.

In transplanting any kind of trees, keep the roots as moist as possible while out of the ground. In setting, the earth should compactly fill all the space around and under the roots, allowing each root and fibre to be buried in its natural position.

I would recommend high, rolling land, for an orchard on that part of the farm least wanted for tillage.* If the place selected be rocky, or the soil poor, it will require more labor, but two hands will soon cart on soil of the right quality enough to cover fifty trees. In common porous soil, let the trees be set with the upper roots about level with the common surface, add rich soil with stones to round up six or eight inches near the body. This will also aid, in some measure, to ward off the mice.

Arrange the trees so far apart that when full grown the top of one will not touch the others. At this distance, they grow faster, receiving more nutriment both from the earth and atmosphere. The fruit plucked from that tree which is supported by a full share of light and heat, will yield more of an improved flavor and color.

I have been made acquainted with but two extensive nurseries in the state of Vermont; these each contain over forty thousand trees. One of them is in Weathersfield, on Connecticut river; the other is in a lake town, conducted by Seneca Hazzard, of North Ferrisburgh. The latter is in a very promising condition, containing most of the valuable and popular varieties of apples, pears, plumbs, cherries, peaches, &c. S. W. JEWETT.

BLEEDING OF THE VINE.—Dr. Underhill stated before the New-York Farmer's Club, that the bleeding of the vine, so far from being injurious, seems to insure a good crop of grapes.

*This should be regarded as a matter of necessity, rather than of choice; as the best soil, kept in good tillage, will yield fruit in much greater abundance, and of much better quality, than a poor and neglected soil.—*Ed.*

New and newly introduced Apples.

AUTUMN APPLES.

AUTUMN STRAWBERRY, or *Late Strawberry*.—This variety, which originated in Western New-York, is one of the finest of all table apples. It is medium in size; roundish, slightly oblong-conical, obscurely ribbed; whole surface dotted and streaked with deep red; stem quite slender; calyx in a distinctly ribbed basin; flesh yellowish white, sub-acid, remarkably tender and very juicy, and of an exceedingly agreeable flavor. It ripens about six weeks later than the early strawberry, and is greatly its superior in excellence. The young trees grow more freely than any other known variety. A good bearer.

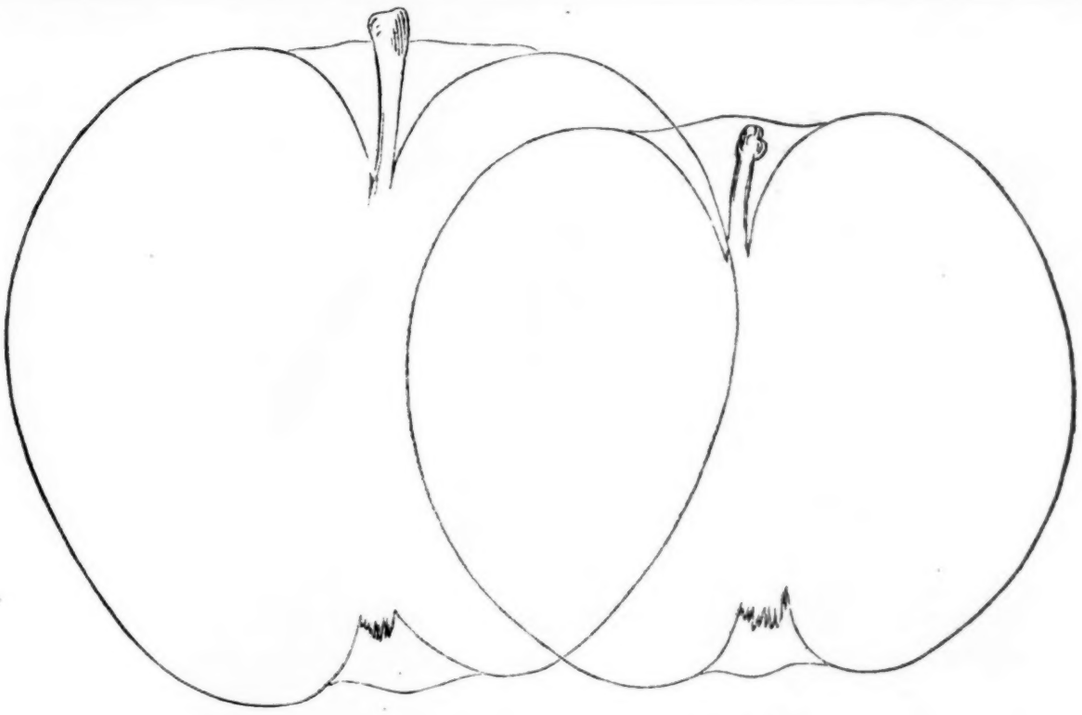
GATE, *Belmont or Waxen*.—This excellent apple has been known for many years in Ohio, and has borne several times in Western New-York. Its merits entitle it to the highest rank. It is rather large; varying in form, but usually ovate-conical, often roundish-conical or oblong-ovate, sometimes with a narrow or pointed apex, and at others quite blunt or rounded; a clear pale yellow, of a waxy smoothness, often with a rich, brownish cheek; stem varying in length and thickness, from scarcely two-thirds of an inch long and stout, to an inch and a-half long and slender; flesh yellowish, of fine texture, tender when ripe, somewhat compact, with a fine rich sub-acid flavor, somewhat resembling that of the Fall Pippin. Tree a free grower, and abundant bearer. Ripens late in autumn. The identity of this variety with the *Waxen* of Coxe, which is described as a "flat" apple, appears not to have been fully established.

FALL ORANGE.—Its origin is unknown. When well ripened *on the tree*, it is nearly or quite first rate in quality, and is valuable for its fair appearance, and the free growth and early and uniform productiveness of the tree. It is perfectly distinct from the Tallow apple, Orange or Lowell, of Onondaga and Oswego counties, N. Y. It is large, round-ovate, regular; light greenish yellow, becoming a light yellow, dotted with grey, and sometimes with a slight brown cheek; stem half an inch long; calyx in a basin with a smooth rim, and slightly plaited within; flesh, sub-acid and tender. In character it resembles the Cumberland Spice and the White Bellflower of the west, but is believed to be superior to either. Ripens during the last half of autumn.

TALLOW APPLE, *Orange or Lowell*.—Quite large, roundish oblong, approaching obtuse-conical, very slightly ribbed; green, becoming bright yellow; stem an inch long; calyx in an even rather deep basin, which is distinctly plaited within, while the rim is remarkably smooth and broadly rounded; flesh rather coarse, with a rich rather acid flavor—hardly first rate, but valuable from its free growth, productiveness, large size, and fine appearance. Ripens early in autumn, and may be kept a month or two. This variety has been cultivated at Cleveland, Ohio, under the name of Queen Anne.

HAWLEY *or Dowse*.—This fruit was first described and figured in the Cultivator, on p. 114, of volume IV. It was afterwards described in the Horticulturist a year ago. It is one of the very few apples of the largest size which prove to be of excellent quality. It ripens about mid-autumn, or a month earlier than the Fall Pippin, which it in some degree resembles; it is more tender in texture than the Fall Pippin, and consequently not so well suited to distant markets. It is a good bearer, and the fruit always fair. Being of a mild flavor, it is apt to be underrated when sent a distance. It originated in Columbia county, and has been considerably disseminated in Onondaga, Cayuga and Tompkins counties, N. Y. Considering all its qualities, it will rank fully equal to the Gravenstein and Fall Pippin.

ST. LAWRENCE.—A large, handsome, and fair au-



Gate, or Belmont. *Leland's Spice.*

tumn variety, much cultivated in the vicinity of Rochester, and originally from Lower Canada. It is hardy, productive and of free growth, and though usually very highly commended, we have never been able to place it above second rate. It is nearly round, approaching flattish-conical, covered all over with dark or blackish red broken stripes, which are remarkably distinct, and become very short and narrow as they approach the calyx; stem half an inch long; calyx in a rather deep, even basin; flesh very white, often with minute red streaks, tender, rather spongy, acid. Fine for market. Ripens mid-autumn.

AUTUMNAL SWAAR.—One of the finest *sweet* apples of autumn. Origin unknown. Large, flattish, rich yellow, usually a reddish brown cheek; stem often long and slender, sometimes short and rather thick; set in a wide, slightly uneven cavity; calyx in a wide, slightly ribbed basin; flesh very tender, yellowish, not juicy, with a very sweet, and agreeably spicy flavor. Mid-autumn.

MELON, *or Norton's Melon.*—Originated in East Bloomfield, Ontario county, N. Y. It was first described in the Cultivator of 1845, p, 56, by Ellwanger & Barry, under the name of Norton's melon; but as it originated in the Chapin and not in the Norton orchard, the first part of the name, which the rule of priority would otherwise compel us to retain, has been dropped. It has since been figured and described in Hovey's Magazine, the Genesee Farmer, and the Horticulturist. It is medium or rather large in size, roundish-conical, often slightly flattened, nearly the whole surface handsomely mottled and striped with full clear red, flesh white, tender, very juicy, with a fine, spicy, sub-acid flavor; when well ripened, first rate. The young trees are of remarkably slow growth. Although a fine variety, it is not equal in richness to the Gate, Fall Pippin, or Gravenstein, but is much admired for its juiciness and fresh, sprightly flavor.

LELAND'S SPICE, *or Leland's pippin.**—Of excellent quality and great beauty of appearance, and cultivated so far as we know, only in the vicinity of Worcester, Mass. It is large, roundish, slightly conical, obscurely ribbed, very fair and smooth, with brilliant red streaks on a bright yellow; stem half an inch long, in a narrow, ribbed cavity; calyx in a ribbed basin; flesh yellow, tender, with a fine, spicy, sub-acid flavor—the New-England Farmer says "a high strawberry like flavor." It is a good bearer alternate years, and is decidedly a first rate fruit. We are indebted to S. H. Colton for specimens from Worcester.

Preserving Buds and Grafts.

The mode first suggested to us by T. G. YEOMANS, of Walworth, N. Y., of preserving the scions of fruit trees in moist saw-dust, has proved superior to any other. It is better than damp moss, in the facility with which the scion may be perfectly imbedded in it, leaving no interstices; and it excells moist sand, in being lighter, more spongy, and entirely free from a grit which may injure a knife. We have without any difficulty preserved scions, which were cut in the summer for budding, till the following spring, and inserted them as grafts with entire success; and we have kept winter-cut grafts till midsummer perfectly fresh, and employed them successfully in budding. A bushel of saw-dust will retain its moisture for many weeks nearly unaltered; but water must not be applied too copiously, or water-soaking and decay will be the result. The north side of a building, or a cool cellar, is the best place.

Salt for Celery.

Plants of Celery were exhibited the past season, at a meeting of the Cincinnati Horticultural Society, to show the benefit of salt as manure for this vegetable. Those without salt, treated in the ordinary way, were not unusual in size or quality. The root and plant of the other, which had received the benefit of salt, was fourteen inches in circumference and weighed fourteen pounds without the leaves, and of excellent quality.

* The Editor of the New England Farmer remarks, that as this is a *red* apple, it should not be called a *pippin*. What is the meaning of the word "pippin?" we have more than once asked the question, and have not received an answer. It cannot refer to the shape,—for the American and the Downton pippins are flat, while the Ribston and and Sugarloaf are conical; it cannot indicate size, for the Downton and Golden are very small, and the Fall and Monstrous pippins are very large; color is not regarded,—for the Newtown is green, the Golden is yellow, and the Ribston and King of the Pippins are red; nor season,—as the Summer is early, the Newtown late, and the Eastern pippin "keeps two years;" nor flavor, the Blenheim being sweet, and the Ribston acid, &c. We should therefore be glad to see a good definition.

PLAN OF A FARM HOUSE.

The accompanying plan received the premium of the New-York State Agricultural Society, at the January meeting, 1848. The main object of the projector has been to furnish the best *ground-plan* for a complete farm house. The style of finish being regarded as a secondary matter, may be chosen according to the taste and circumstances of the builder. The representation here given, is ornamental, and at the same time compatible with convenience and comfort.

The committee on Farm Dwellings, &c., in submitting their report, make the following remarks in reference to this design: "The ground plan gives an excellent and convenient arrangement, which could not be better described than in the lady's own words. The committee would say one word on the mode of warming houses by means of heated air from a furnace, which is adopted in the plan offered. The same correct notions of conveniences and comforts, that suggested in the plan many of its arrangements, also suggests this most effectual, most economical and least dangerous method of throwing a summer heat into all parts of even a large building. This supercedes all fires, excepting that essential bed of living coals in the kitchen."

We extract from the *Transactions*, the following description of the plan.

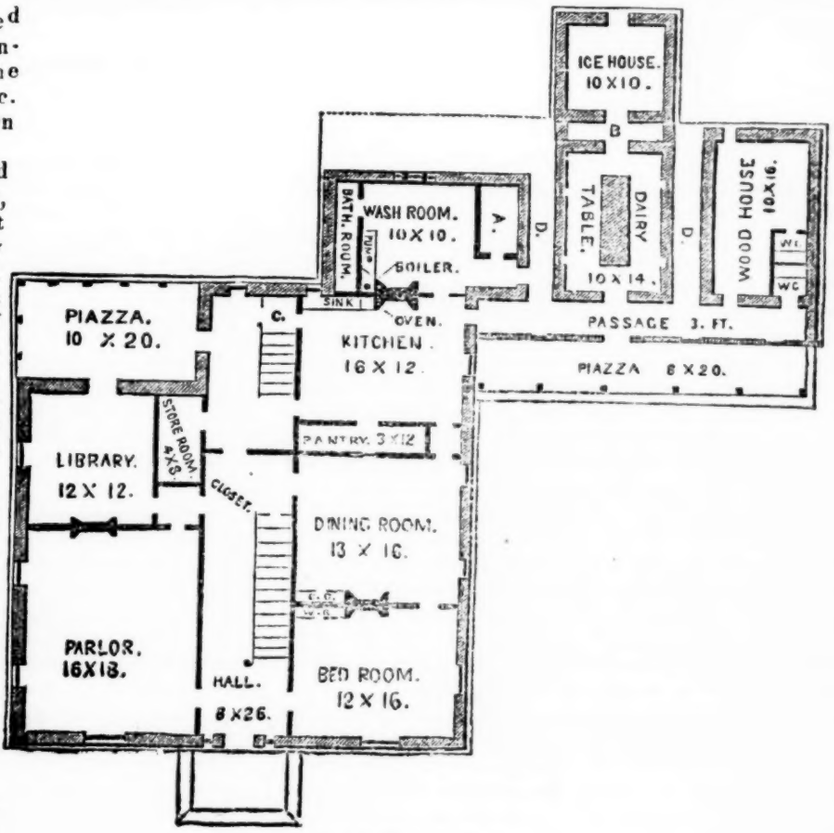
The accompanying plan is designed to front south, with an elevation of thirteen feet from the sills to the roof. It should occupy somewhat elevated ground, sloping a little to the north, and should be raised on an underpinning to suit the ground. To give chambers to the size designated, the apex of the roof should be not less than twenty-two or twenty-three feet above the sills. It is highly proper to leave a *space* for air, between the finish of the chambers and the roof, which will prevent the rooms from becoming heated in summer.

The site should be selected with a view to the easy construction of drains from the sinks, bathing house, dairy, &c. directly to the piggery or barn yard.

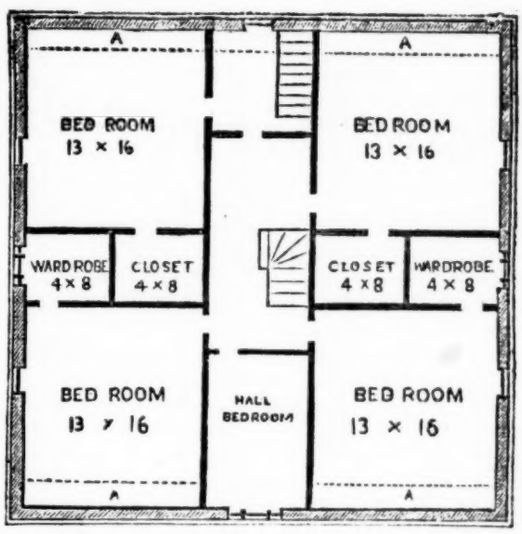
It is of course expected a good farmer will have a good cellar, and in some situations, the best way of warming a house is by a hot-air furnace in the cellar. The size of the cellar and its particular divisions, should of of course depend on the wants or circumstances of the builder. In some cases it may be expedient to have it extend under the whole of the main body of the house.

It may be observed, however, that it is not advisable to store large quantities of vegetables under dwellings, as the exhalations from them, especially when unsound, are known to be decidedly prejudicial to health. Hence the *barn cellar*, and not that of the dwelling house, should be the repository of such vegetables as are wanted for the use of domestic animals.

Directions in regard to warming houses by furnaces, may be found in works relating to the subject, or may be obtained from persons engaged in their construction. There are various modes; but my own experience does not enable me to decide upon their relative advantages.



Ground Plan.



Second Floor.

In the construction of this plan, it has been my object to combine utility and beauty, as far as practicable with the *labor-saving* principle. In the arrangement of the kitchen and dairy, particularly, special regard has been had to securing the proper requisites for those important departments with the greatest practicable degree of convenience.

In constructing a dairy, it is proper that such an excavation should be made as will leave the floor, which should be made of stones, two or three feet below the surrounding surface. The sides should be of brick or stone, and plastered; the walls high, and the windows made so as to shut out the light and admit the air. The advantage of *thorough ventilation* and pure air is acknowledged by every one who has ever paid attention to the manufacture of butter, though it is a matter generally too little thought of, in the construction of apartments for this purpose. It will be observed, that in the plan herewith submitted, an open space of two and a-half feet has been provided for on three sides of the dairy.

To render the establishment as perfect as possible, the command of a good spring of water, which may be conducted through the dairy-room, is necessary; when that cannot be had, an ice-house in *direct contact*, (as in the accompanying plan,) and a good well of water convenient, form the best substitute.

The expense of such a house in this vicinity might be varied from fifteen hundred to three thousand dollars; according to the style of finish, the taste and ability of the owner, &c. The main conveniences may be retained at the lowest estimate, by omitting the ornamental front.

M. W. Howard.

Composition of milk.—According to Johnston, every hundred pounds of milk contain about half a pound of salines; the 100 pounds contain about 10 pounds of solid matter, and the proportion of ash in this solid matter is about one-twentieth of its whole weight, the analysis of which is given as follows:

Phosphate of lime,	23 1
Phosphate of magnesia,	4 2
Phosphate of iron,	0 7
Chloride of potassium,	14 4
Chloride of sodium,	2 4
Free soda,	4 2
Total,	49 0

THE FARMER'S NOTE BOOK.

To Farmers.—No. III.

No greater inconsistency is presented in the whole system of our Common School education, than in the want of studies suited to that part of our population engaged in Agriculture. Three-fourths of the whole number attending our Common Schools, eventually resort to Agriculture as the business of life, and nine-tenths are either directly or indirectly engaged in farming or gardening at some period of their lives. And yet, in most of these schools not a single study is adapted to prepare the scholar, or inform him, upon subjects immediately connected with this pursuit. The whole instruction appertaining to this subject, usually obtained by our farmer's sons, before called upon to act for themselves, is that derived from the labor exacted from them at home, during their minority, and their knowledge of farming is generally limited to the experience and the practice pursued by their parents and guardians. Too often now, it is to be feared, the child looks upon the employment, as a mere servile labor, rather than a pleasant occupation, and one of all others, best suited to his happiness. Being entirely ignorant of the first elements of Agriculture, as a science, he scarcely knows for what end his labor is bestowed.—"As the twig is bent the tree is inclined." Were this maxim properly acted, the first efforts would be to give children early instruction in some simple and appropriate studies, suited to the business of Agriculture, so that they might labor understandingly, in whatever they should be called upon to do in these pursuits, when young. The effects of such education would soon become manifest, and the instruction so acquired, would be of incalculable service to them in after life. With the knowledge of the necessary means to be used to make, and keep, their lands fertile, a large increase of produce might be realised from the improvement of them. and the increasing demand for market, be more certainly met and supplied; and we should see fewer persons willing to leave their present comfortable homes, and encounter the hardships incident to the removal to a new country, in anticipation of improving their condition. An Agricultural education is daily becoming of more and more importance to all who remain in the older settled portions of our country, to enable them to compete with the surplus productions of the rich land of the west. As a means of judging of the capability of many of our lands to produce a very large increase upon what they now do, let any person look into his own neighborhood and he will find no difficuly in selecting fields producing from two to three tons of grass per acre, while perhaps the adjoining field, no less capable of producing the same amount with proper culture, now scarcely yields a ton per acre, and so of other crops. In the reclaiming of low and wet lands, by means of draining, a large amount of productive land might be added to that now cultivated. There are not wanting many examples in our own state where, by means of judicious draining, large tracts of land have become among the best of our farming land. Part of the land formerly known as the Canastota Swamp, is a marked example of this kind. The renovating of old and worn out lands, that have been plowed for a long succession of years, by deep tillage and proper manuring, would be another means of greatly increasing the agricultural productions of our farmers. Many instances of this kind are familiar to those acquainted with the lands along the Mohawk river. When our farmers shall generally be so educated, that they can with a knowledge of the Science of Agriculture, put forth their energies to accomplish the end desired, we shall be disappointed if the results anticipated by such an education, do not fully meet the most sanguine expectations of its most zealous advocates. Oneida.

Spare the Spider.

I like the spirit of the article which appeared in the June Cultivator, inculcating kindness and attention to birds and toads for their usefulness in the garden. I desire to say a word in behalf of another useful friend of man, but whose friendship is met with almost unrivalled enmity and ingratitude. I mean the *Spider*. I do verily believe that, without his ceaseless vigilance, his untiring alertness, his wary cunning, his sagacious ingenuity, his fierce daring, and his voracious destructiveness, *it would be impossible for man to get enough out of the earth to save himself from starving!* Look at your garden and your fields, and see the endless variety of them, and their countless numbers, constantly in pursuit of prey, which they devour with unappeasable voracity, and say where would be the end of the ravages of pernicious insects if it were not for their relentless war upon them. And yet, there is not one man in five hundred, on finding one of them in his way, who, instead of touching his hat to him and giving him the walk, will not waste strength enough to knock down a steer in smashing him out of existence. They are sacred in *my* household, spiders are. If they accept the invitation of open windows, and walk into the parlor, and set up shop to the blemishment of good housewifery, they are considerately taken upon a broom and waited upon to the door, with thanks for their good intentions and regrets that their services were not wanted in that department, and a friendly suggestion at parting that they can do a better business elsewhere. But they are tolerated in the kitchen in a sly way, on account of the love they have for the society of that enticing little creature, the house-fly. I teach my children to destroy ruthlessly, almost every other creeping or winged insect, but to *spare the spiders*.

There is the large, round bodied spider, who suspends his circular net vertically in every angle about the house and out houses—a lazy old fellow to look at, but woe to the flutterer that touches his toils. The house-fly is the special object of his regard, and hence he is seldom found far from dwellings. There are many varieties, large and small, which adopt his mode of entrapment. Splendid specimens, in size and variety of decoration, abound in the woods and meadows, whose nets are almost tenacious enough to hold a bird. The largest kind of bugs and grasshoppers fall an easy prey to these.

Then there is the *garden spider*,—so called, I suppose, because he is found indiscriminately and abundantly around every dwelling, and barn, and wood, and field—with long slender legs and body, the latter faintly striped with buff down the sides. He spreads a compact sheet, horizontally, with well formed tubular avenue leading to his dungeon, at the entrance of which he grimly awaits the approach of some thoughtless wayfarer, who is dragged into it with inconceivable rapidity the instant he alights upon the tempting surface. He is not particular in his diet.

One of the most interesting of the race, is the small *transversely-striped spider;* very properly, from his appearance and mode of seizing his prey, called the *tiger spider*. You have seen him on the sunny side of a

building before now, on the alert for insects which resort there for warmth and pastime. Here is one now, a fly has just settled within a few inches of him. You scarce saw the instantaneous motion with which his head was presented to his game as it alighted. Mark the oily, sidelong movement with which he gains a place above him, and now see the cautious, stealthy, almost imperceptible motion with which he advances—nearer, nearer—there! a leap of eight times his length, and he has him! Was ever anything more tiger-like?

But there is another chap who most excites my admiration. He is a small brown fellow with a light body and long legs; and he has a peculiarly pert way of standing on the very ends of his toes, bearing his body high up. He is the true sportsman of his race. He scorns the adroit stealthiness of the last, and holds all devices for entrapping his game in infinite disdain. He takes his position on a standing board, or in the garden walk, when the sunshine falls thick upon it, and as the creature of elegant leisure drops down to enjoy a moment of luxurious repose, he darts upon him with the celerity of lightning, and with an assurance of success, that seems utterly unconscious of the possibility of failure,—it scarce mattering what degree of space intervenes. I have rescued his victim almost on the instant of his seizure, but he was stone dead. Venom as virulent as the scorpion's, had pervaded his system.

There is also a spider of magnificent proportions, robed throughout in richest black or dark brown velvet. He roams everywhere. I have seen him in the woods, bearing off a centipede twice his own size, with the royal air and ease of a lion conveying a stag to his quarters. He is fierce, fearless and indomitable, and is said to hold equal combat with the toad.

My attention was once arrested by a small, compact irregular mass of dirt, moving off upon the floor with mysterious alacrity and regularity. On examination, I found it to be a small spider, whose body had a peculiar glutinous secretion, to which particles of dirt and sand adhered—thus effectually concealing his personal attraction. I have never but once since met with this curiosity. Doubtless many a young rat among insects has rued the day that he mistook "that white heap yonder" for something as harmless as "meal."

All these, and an infinite variety of others of this active and intelligent race, are constantly laboring for the welfare of man. Again, I say then, SPARE THE SPIDERS. J. C. H.

Syracuse, 12th June, 1848.

A Rhode-Island Premium Farm.

Mr. THOMAS ANDREWS, of Smithfield, obtained the premium offered for the best cultivated farm, by the Rhode-Island Society for the Encouragement of Domestic Industry in 1847. The committee who examined this farm speak of it in high terms. It had been in the possession of Mr. ANDREWS ten years, and the committee say, that having been familiar with it in former years, they "were not less surprised than gratified with the striking change that has been effected by its present owner." They say further—"The farm throughout shows skilful, sound, and clean husbandry; the buildings are nearly all in excellent condition, and the many contrivances within doors, and without, for abbreviating labor and economising time, for the comfort of the family, and for the humbler tenants of the stable and the sty; and especially, the arrangements for the collection and preservation of everything that can be converted into manure—all indicate the orderly, pains-taking and industrious farmer; and show that while he keeps a steady eye upon everything that can be turned to profitable account, he is not unmindful of the higher duty of rendering his home agreeable and respectable." In regard to Mr. A.'s mode of feeding his animals, the committee remark that he has gone on the "sententious advice of an experienced old farmer, '*feed high.*' He has always acted upon this plan. Every animal upon his premises, biped and quadruped, is well fed and full fed. His cattle are not lank, hide-bound, costive and cross, but fat, sleek and kindly."

We make the following extract from Mr. ANDREWS' statement to the committee:

"My farm contains 113 acres. There are about 50 acres of arable and reclaimed land, 30 acres of pasture, and the balance is mostly in wood.

"When I bought the farm, the buildings and fences were out of repair. The land had been so long cultivated with very little manure, and that probably applied in the hill, it was in a very poor and run down condition. There were not more than two cords of manure on the place. The first summer I raised 40 bushels of potatoes, and 60 of corn. I kept four cows, a pair of three year old steers, and two horses, but was obliged to buy three tons of hay to carry them through the winter. Since that time, I have depended upon the resources of the farm and stock for manure, except two hundred and nine dollars worth of stable manure, and about two thousand bushels of ashes which I have bought. The present condition of the farm will be sufficiently indicated by the following enumeration of its products the present year—the prices are such as I have actually sold the articles at, or can now command for them.

80 tons of good hay, from 30 acres, 12 acres yielded 36 tons, $14,	$1120 00
3 tons swamp hay, $5,	15 00
8 " oats, on 4½ acres, cut green for fodder, $12,	96 00
2 " rye straw, $6,	12 00
Corn stalks and husks from 5½ acres,	50 00
283 bushels Indian corn, $1,	283 00
32 " rye, $1,	32 00
600 " Potatoes sold, averaging 65c.,	390 00
400 " " on hand, have been offered 75 c.,	300 00
90 " " small, 25 c.,	22 50
1000 lbs. winter squashes, 2c.,	20 00
87 bushels winter apples,	36 00
3 " quinces,	6 00
29 loads pumpkins,	29 00
7 bushels white beans,	10 50
Small fruits, $15.74,	15 74
Sweet corn, $5,	5 00
43 bushels fall turneps, 33 c.,	14 19
Garden vegetables, of various kinds,	25 00
	$2481 93

"I now keep 4 oxen, 12 cows, 2 horses, a bull, 20 shoats and 2 hogs.

"The following answers to your queries will show my mode of cultivation.

"1st. Depth of Plowing.—I plow 8½ inches in all cases where it is possible, and in some loamy soils deeper.

"2. I used the subsoil plow last year on a field of 6 acres; subsoiling 4, and leaving 2, as an experiment. I plowed with a common plow, 7 inches deep, and followed with the subsoil 20 inches—stirring the earth 27 inches—sowed oats and grass seed. The *oats* were very large, on all the six acres, averaging 5 feet high, and there was no perceivable difference in the oats by subsoiling.*

"3. Rotation of Crops.—I find planting Indian corn more than one year on the same land makes but little difference to the crops, but almost every other kind of

* The grass was a week later on the part of the field that was subsoiled; there was less clover, but more herds grass and red top; the yield of hay was somewhat greater.

grain does not do as well. Rye is more apt to blight, and potatoes are sure to fail the second year. I have not generally got more than half a crop from second year's planting.

"4. Indian Corn.—I cultivated for five years the *white* cap corn of medium size, and deep plowing and manure caused it to grow larger and later. I also tried the *yellow cap* corn, but I find the white to have less weight in cob, and more fodder than the yellow. Last year I planted two acres of the white and yellow mixed equally, and found the result was in favor of the *mixed* corn. It was heavier than either white or yellow, by three-fourths of a pound to the bushel. I generally plant green sward, plow late in the spring, as plowing in the fall by freezing and thawing, the soil becomes wasted by winds blowing, &c. By plowing late in the spring the corn is never injured by the grass worm. I plant my ground but one year if I can get the sod rotten enough to seed down. If I plant two years, I plant potatoes first and corn afterwards, as the land will decidedly take seed better after corn than after potatoes—but by planting only one year the grass crops will last longer than if planted two years. I plow in the manure about the middle of May, roll with a heavy roller, and mark the rows with a light plow 3½ feet by 3, and put five grains in a hill, at second hoeing, leave four the healthiest plants to grow. I hoe as soon as the corn will admit—hoe three times. Work with cultivator between the rows, twice hoeing, but at the third hoeing it breaks down too much corn to work a horse between the rows. I make no hill, but keep the surface as level as possible, that the brace roots may hold it from blowing down, as in hilling the brace roots cling to the hill and are torn up easily, and if the season be dry, it is much more liable to suffer from drought. I commence cutting the stalks, as soon as they are ripe enough to cut for the milch cows, and continue using them for feed till they become too dry, as they are worth double to feed green, than in the winter when dry. By this method of cultivation I raise from 40 to 70 bushels per acre, and sometimes even more."

Preservation of Animal and Vegetable Substances.

A valuable process for preserving various substances, is noticed in the English papers. It consists, 1. In an improved method of applying rapid currents of heated air to the drying and preservation of vegetable substances. 2. An improved method of applying rapid currents of heated air to the preservation of meats.—3. An improved method of applying heat to the preservation of the edible matter contained in eggs.

Vegetables, such as carrots, turneps, parsnips, &c., are first washed and scraped, then sliced by hand or machinery, and laid in thin layers on trays with hair cloth or lattice work bottoms, and the trays placed on racks, one above another in the heating-chamber. When thoroughly dried they are to be put up in packages; or before packing they may be reduced to a fine state;—but the packages should in all cases be air-tight. Potatoes are preserved by first boiling or steaming them, and after being peeled, reduced by mashing or otherwise to a state fit for spreading in thin layers, upon trays of the same description as those employed for the articles above named. The trays with the substance are exposed to currents of heated air, at a temperature of about 150° (Fah.) till the substance is thoroughly desiccated. If the substances are of small size, such as peas or beans—they are exposed in their entire state to the rapid currents of heated air.

Meat, when bulky, is first cut into slices of about half an inch thick—the slices hung on lines or nails, exposed to the currents of heated air—the temperature 120° to 160°. All moisture is by this means completely expelled from the meat, and its albumen at the same time, firmly coagulated. Meat which has been so treated, will continue for a long time, under ordinary circumstances, in a perfectly wholesome state; but if it is intended to be exported to damp or variable climates, it is recommended to apply a little highly-diluted pyroligneous acid, or some other approved antiseptic, to prevent it from reimbibing humidity; after which it should be subjected to a further heating in order to free it from any moisture it may hold. To ascertain when the meat is perfectly dried, a portion of it may be weighed at intervals, and when it ceases to show any diminution of weight, the process may be deemed complete.

To preserve eggs they are taken from the shells, the white and yolks intimately mixed together, and about an equal weight of wheat flour, ground rice, or other farinaceous substance, is added to them, and the whole beat into a uniform mass, which is spread upon trays of horse-hair cloth or lattice-work bottoms. The mass is then exposed to a temperature of about 180°. When thoroughly dried, the mass is reduced to the state of flour, and in that state packed up for use. The eggs may be preserved in their entire state, denuded only of their shells, the yolks and whites being dried and reduced to a state of flour without any intermixture with other substances.

Cultivation of Forest Trees.

The natural scarcity of timber in some sections of this country, and its prodigal waste and destruction in other sections, have already occasioned the necessity of artificial plantations. This mode of producing forests has long been successfully practiced in England, and some trials which have been made, lead to the belief that its results would be equally as favorable here.

In the Transactions of the Essex (Mass.) Agricultural Society for 1847, we find a valuable essay on the Cultivation of the Oak ond other Forest Trees, by G. B. Perry. This essay received a premium from the Society. We present the following abstract of the principal points set forth by Mr. P. His remarks are chiefly confined to the cultivation of the oak.

It is recommended that acorns for planting should be taken from trees of the right kind, which stand at a distance from other oaks of a different kind. This is important on account of the hybridization which takes place when the different kinds grow near each other. Mr. P. thinks there is scarcely any tribe of forest trees in which this process is carried on to that degree as in the oaks.

The kind of oaks deemed most proper for cultivation, are the white, grey, yellow and black. Each of these has its peculiar properties, and is calculated for purposes for which the other kinds do not answer so well.

In regard to the questions, how the acorns should be managed for planting, and whether they should be planted in the fall or spring?— Mr. Perry, after fully considering the various modes, decides that it is best to gather the acorns as soon as they are dropped, put them in a box with earth and let them freeze hard; after which they should be kept till spring in a cool, shady place, covered thick with straw.

The question has been considerably discussed whether young forest trees should be cultivated—that is whether the ground should be loosed around with the plow or other implements; Mr. P. is of opinion, that when "the *right* culture" is bestowed, its effects are equally as useful on the "wild trees of the forest, as on the reclaimed ones of the orchard." In attempting the cultivation of the oak, injury has sometimes been done by breaking off the roots and otherwise mutilating the trees. Care should be taken in this respect—especially that the implements do not run too deep.

It is advised that trees should be cultivated in a nursery till they are five or six years old, and then transplant them to an open lot. Mr. P. thinks it is not unlikely that they may sometimes be kept in the nursery with advantage till they have attained the age of ten or twelve years.

In regard to heading down, pruning, &c., Mr. P. observes that from what observation he has been able to make, he is convinced that the top first thrown out almost invariably dies, "either before or after a new sprout from near the earth starts forth," and he thinks the process of nature is only seconded by art, when the top of a seedling oak, whether in the field or in the nursery is taken away to facilitate a better shaped and more vigorous growth. He has had long experience in raising trees of different kinds, and he is confident of the advantages of this process. He observes "I have in my nurseries but few trees which I supposed would not be improved by removing the top after having attained the age of three or four years. I have sometimes judged it necessary to subject them to a second and in some instances to a third process."

In regard to the question; how long it takes an oak to reach its ordinary growth? Mr. PERRY observes that there are not enough well attested facts to enable him to speak with definiteness. He thinks particular inquiry should be made in reference to this point. One instance, however, is mentioned, which is worthy of notice. Four oaks, forty years old. stand on the side of a hill—the soil a sandy loam. The largest is estimated to contain over a quarter of a cord of wood.

"Of the general fitness of our soil for the production of the oak in its full size and greatest strength, we have pleasing demonstrations in the majestic trees of this species which still remain scattered over most of the country, as well as in the safety with which our own majestic ships, built of our wood, and fashioned by the wise craftiness of our own men, have resisted and out-lived the mighty lifting up of the ocean wave"

The general advantages arising from planting forest trees are thus summed up in concluding the essay:—"If we value, therefore, the wealth or happiness of those who come after us, or regard the estimation in which we shall be held by those whose gratified feelings and kind remembrance we wish to secure, we can take no more wise and sure course than to cover our hills, ornament our plains and fill our valleys with a rich proportion and pleasing varieties of the forest trees. Mixing those that put forth their freshness in the spring, with those which by their evergreen foliage maintain in the winter season, a pleasing contrast with the whiteness of the drifting snow. With such an inheritance handed down to them, our children's children made glad by the glory and beauty which they see around, will say that we, their fathers, were a wise and understanding people."

Effects of Ashes.

MESSRS EDITORS—Last fall I had a compost heap of manure and muck in preparation for covering my seed-beds of plums, apples, pears, &c., and a quantity of corn-stalks and weeds were thrown on the top of the heap and set on fire. A shower came up and we left it, but the top of the heap being quite dry, it kept burning all night and half of next day. The ashes were spread over a part of a long bed of plum stones in my nursery, and the effect is visible to this time, the young trees looking darker and are much larger than the others where the unburned compost was put. Still they had the ashes of a larger quantity than was given to the rest, though when applied I thought them worthless, and only put them on as an experiment. CHARLES HAMILTON. *Canterbury, N. Y., July* 10, 1848.

Comparative weight of good and poor milk.

Having frequently heard various opinions expressed in regard to the comparative weight of good and poor milk, and having never seen an account of its being tested, I resolved to try the following experiments:

9½ qts. cream, 19 lb. 2 oz., which made 11¼ lb. butter.
9½ " N. milk, 19 " 2 oz.
9½ " S. milk, 19 " 10 oz.
9½ " water, 19 " 2 oz.

RELATIVE PROPORTIONS OF MILK AND BUTTER.—By referring to my books, I find that in 1839 I made the following trial from four cows in two days.

Cow No. 1,	21qts.	milk,	2lb. 1oz.	butter,	1 4-7oz.	pr qt.
" 2,	23	"	1 13	"	1 1-4	"
" 3,	20	"	1 4	"	1	"
" 4,	18	"	1 12	"	1 5-9	"

About the same time I weighed a single quart of new and skimmed milk, each, and could not perceive any difference in the weight of so small a quantity.

EDWARD CLARK.

Waterbury, Ct. July 1, 1848.

[The above is a good illustration of the fact that the quantity of milk does not indicate the quantity of butter it will afford. EDS.]

Chemical Names.

Substances in organic chemistry, the names of which are frequently used by scientific writers, explanations of which many readers may find convenient and useful.

Acroleon—the substance generated by the decomposition of fat, when highly heated, causing the disagreeable smell usually noticed.

Ambreine—principal ingredient of ambergris.

Amygdaline—a substance in almonds, peach-kernels, &c., yielding by decomposition oil of almonds and prussic acid.

Arabine—gum arabic,—forming with water, mucilage.

Camphene—the true oil of turpentine, obtained from common turpentine, and having power to unite with muriatic acid, forming what is called artificial camphor.

Caseum, or *Caseine*—the curd of milk.

Cerasine—chief ingredient of cherry gum.

Cerumen—wax of the ear.

Colophony—the compound rosin which remains when the crude turpentine from trees is distilled.

Dextrine—a gum, formed from the starch of seeds in vegetation—or by starch and sulphuric acid.

Faradyn—the lightest liquid known—weighing only thirteen-twentieths of its bulk of water—obtained by distilling india rubber.

Glycerine—a principle or constituent of all fats, and of their ingredients, stearine, margarine, and olein.

Inulin—starch from elecampane, dahlia, dandelion, &c.

Lactine—sugar of milk.

Legumine—extract of beans and peas, with properties intermediate between gluten and albumen of wheat.

Lichenine—starch from Iceland moss and other lichens.

Lignine—principal ingredient of woody fibre.

Palmatine—a peculiar stearine in palm oil.

Pyin—the liquid, which, united with albumen, forms pus.

Sinapisine—the pungent principle of mustard seed.

Stearine—a constituent of fats—most of them being stearine and margarine, with a simple oil, olein.

Turbene—a liquid obtained from turpentine.

Xyloidine—a very combustible compound, formed by combining woody fibre with nitric acid.

Management of a Dairy Farm.

Mr. Chauncey Beckwith, of Columbia, Herkimer county, presented to the Agricultural Society of that county, in 1847, the following statement of the products and expenses of his farm for that year. It affords an excellent example of the advantage of system and economy, and shows what even a "slender man, not able to do heavy work," may accomplish, provided he has the mind for it. We copy from the *Transactions* of the N. Y. State Ag. Society.

My farm consists of 100 acres, situated seven miles south of the Erie canal, and is about 900 feet above its level. I have 85 acres under improvement, on which I have kept 2 horses and 21 cows; 37 acres to pasture, 35 to meadow, 8 to oats, 2 to corn, 1 to wheat, 1½ to sowed corn, 8½ to potatoes.

Account Current.

Made 12,000 lbs. cheese, sold at 7 cts., weighed in the fall and well cured.		$840 00
Sold apples,		40 00
do butter,		20 00
Calves' skins,		10 00
		$910 00
Interest on 4,000 pd. for farm,	$280 00	
do 400 do cows,	28 00	
do 150 do horses,	10 50	
do 150 do utensils,	10 50	
	$329 00	
One hand 7½ months, $12,	90 00	
Paid for days' works,	40 00	
do hired girl, 35 weeks, $1.12½	39 38	
do mechanics' bills,	20 00	
do shorts for cows,	20 00	
do plaster,	12 00	
do cheese boxes and bandage,	35 00	
		$585 38
		324 62
Permanent improvements, stone wall, &c.,		50 00
		$374 62
Seed grain not taken into account, as it is the product of the farm from year to year.		
Family expenses, besides appropriating a portion of the products of the farm for such purposes,		120 00
Net profit,		$254 62

I make this statement not for the purpose of boasting, but with a hope that other common farmers will be induced to make similar statements. It is believed that the statements usually made and published, are of farms in a very high state of cultivation, and if not extravagantly made, show a large yield and large profit, better calculated to discourage than to encourage farmers in moderate circumstances. The soil of my farm is gravelly loam, the timber mainly beech and maple, with elm and basswood, eighty acres under improvement; have kept cows two seasons: when I commenced, the farm had been for several years fed close by sheep, and was not in a good situation for keeping cows. My family consists of myself, wife, and four small children. I am a slender man, not able to do heavy work; have made the cheese and done some chores. Have kept my cows always in good condition; have fed hay usually during winter; when I feed straw, some meal is fed, so as to make the keeping equal to good hay; from about the first of March, I feed two quarts of corn or barley meal to each cow per day until the pasture is good; they are kept in good stables, and during summer are put up night and morning in a milking barn, near and convenient to the cheese room, and fed the whey with meal or shorts, the quantity depending on the situation of the pasture; commence feeding corn about the middle of August once a day, and the whey with shorts or meal once.

This fall after the corn was injured by the frost, fed a half bushel of apples to each cow per day, and late pumpkins, continuing to feed the whey, with shorts or meal, until they were dried off; have kept twenty cows for the dairy and one for the family. The yield of cheese per cow the past season, six hundred pounds, sold at seven cents; I think the extra feed, made at least one hundred pounds per cow; the cost of shorts was one dollar per cow; the meal being the product of the farm has not been in any manner taken into the account. The season has been dry and not favorable for dairying. I am convinced that good feeding pays well; the milk drawn from the cow is a monstrous draft, and if they are not well fed, they will run down and be poor in the fall, and the yield of milk small during the latter part of the season. The practice of sowing corn to feed in the fall, should, and I think will become general; if cows are well fed, they will be in good condition in the fall, which enables us to turn our old cows and such as are not good milkers, for beef to good advantage. I should put the cows up to milk if I did not feed; the trouble of feeding after they are up, is not great. The whey runs from the box in which the cheese is made, into a vat, and from that, by pump logs it is drawn into pails in the alley of the milking house. The cows being in two rows, with their heads to the alley, and a tub for each; the meal bin is at one end of the alley; from this to the cheese room, a distance of some ten feet, plank are laid to walk on, and a temporary roof over, so that we pass from the milking house to the room where the cheese is made, without being exposed to rain or mud; still this space is open for the circulation of air. I should feed my cows during summer, if it did not add to the quantity of cheese, as it is a satisfaction to see them look fine, and in knowing that they feel comfortable. Chauncey Beckwith.

Writers for Agricultural Papers.

There appears to be a desire among many writers and readers of Agricultural papers to interdict from the columns of the press all writers who are not rigidly practical men, and to my comprehension this is an error that should be discountenanced.

Are we to weigh every measure every thing by its mere worth in dollars and cents? True, a man may be practical in the growing of flowers, or the dressing of a set for a finger-ring or a breast-pin, and might be admitted on the one hand as practical, or on the other as one who has grown rich. Yet there may be others much better qualified to give directions than either the one or the other. Were a man required to teach one how to handle a spade or a hoe, then we might look for the practical man. Or were we giving lessons in making money, then the man who would best give demonstrations how to live on nothing, and spend no money for comfort or luxury, would be the man to look for.

The great bug-bear is theory; that is the stumbling block. Now this thing of theory is as essential to the thinking planter or farmer who desires improvement, as is any other thing. Hypothesis is quite another matter. The one lays down reasons from known premises, deduced from facts. The other assumes premises, and is too prone to be a dreamer.

The lamented Willis Gaylord, was one of the most cogent and able writers we have ever had, yet he was unable to practice the theories he had deduced from his early labors, which were even then limited from bodily infirmity.

I have been a tolerably close observer of men and things, and I think I should not err, if I said—as a *rule* laboring men are not in the main good at directing, nor

are money-making men good managers. The first follows too much a routine taught him; the other has no other idea but saving. The first fears to try an improvement he never tested, a course of cultivation he never tried, a seed he never used, lest he might not do as well. The other will not lay out a dollar that he does not see the immediate return of. There are exceptions I admit, and when we meet the enlightened mind, then we should hold on to and encourage. But the idea as thrown out by one writer in an Agricultural paper, that money-making men, are the men who improve land and stock, keep up fences and buildings, and in short do every thing well—is a vain hypothesis. Let us go into any neighborhood, and we shall find men who are accumulating property, who wear out land, and live without much expense. Large crop makers, work at a heavy outlay of something, and the man who makes large crops has not the time to rebuild, or improve land.

Most men that have accumulated large estates, can not tell how they have grown rich—and other men who make large crops, cannot see why every body can not do so. The fact is, there are "vessels made to honor, and others to dishonor;" some men with one faculty and others with another; to make money comes as easy to some men, as the eternal waste comes to others. Let us hear from all, and though we may have to pick over a bushel of chaff to get a grain of wheat, yet we may be benefitted thereby.

I do not like this way of ruling off the track, all that have not the Flying Childers or the Eclipse blood in their veins; if agricultural readers only want to hear how they can make dollars, let them call up the misers from their dens, who can but tell them how many grains of corn will do to support life; and as they pay for the printing they have a right to control. As for me, this eternal weighing and measuring with a dime, I am sick of. I love dimes, but I do not want to eat them, nor to sleep on them, nor to measure a man's honor, nor his worth, nor his ability to advise me, by the length, breadth, weight or worth of his purse.

If I wanted legal counsel, I would not ask whether Daniel Webster was wealthy; if I wanted medical advice, I would not ask whether Valentine Mott could make pills fast. No, sir, I would ask—are they fully, sufficiently, entirely competent in their professions?

Why should not the principle prevail in agriculture? Why should not Dr. Daniel Lee be just as able to instruct in the best mode to conduct an estate, as any Jonas Smallbones in the land, though he might be born between the plow-handles? The instructor must have the faculty of communicating his views, and should by all means be thoroughly conversant with his subject—then, it matters not whether he be a doctor or a plowman.

There are many who are too much bound to their own views to examine others, or to give them a trial. Much of this natural (I may say) disposition is broken down by mixing with our neighbors—by education—yet it will hold to oneself in spite of him.

I consider myself a practical man, yet I have not hoed a row of corn or cotton in many years, nor turned a furrow, yet I am not considered practical by the majority, because I had the blessed advantage of having had a father who sent me to school and made me study.

I cannot accumulate property, nor do I have that sort of a desire: I see so many things I want, that I spend my dollars before I get them to jingle. Though I am not anxious to write for the press, and will gladly quit, whenever I see such a desire exhibited by even a tithe of the readers, I have vainly thought that, though I have sheep-skins enough to permit me to use the M. D. I might be of service to my fellows; if in error, I assure you and all others that I erred in judgment, not from any vanity. M. W. Philips. *Edwards, Miss., June* 10, 1818.

Time for Cutting Hay.

As the season has arrived for cutting hay, and as there is much difference of opinion in relation to the proper time for cutting it, I will just mention the course taken by one man in this mountain town. The man to whom I allude, is John Pratt, and he has managed a dairy of sixty cows for nine years; and in all that time he has not had a cow that has had the least trouble in calving, or cleaning, (as he told me himself) which I think something remarkable. Mr. Pratt's course is, to commence cutting his hay very early, generally before any body else thinks of it, or as soon as it begins to blossom; and he gets help enough to cut all his hay before it gets very ripe, and is generally one of the first to finish haying. He attributes his success with his cows, to *early-cut* hay, together with *careful attention* through the winter; and the rest of his stock corresponds in appearance with his cows. E. L. H. *Shrewsbury, Vt. July* 10, 1848.

Importance of Cutting Roots for Domestic Animals.—1. To avoid choking in the case of cows. 2. To secure better digestion of the food, and of course the better health and improvement of the animals, and the more economical use of food. 3. To save the teeth of the animals, more particularly the horse. This animal often refuses to eat roots, after having taken them freely for a few weeks, entirely, as I suppose, because his teeth have become sore. By frequently biting into roots of two or three inches in diameter, the gums become chafed, and the animal refuses to eat the roots.

Root Cutting Machines—A Cheap Substitute. I never felt the need of a machine of this kind although I have fed roots freely for many years. I use a box with a hard wood plank bottom. The size depends on the amount of stock to be fed. In such a box I crash them with a square headed mallet. Here are no knives to get dull or be broken by a stone among the roots. This box may be kept in your cellar in cold weather. All sorts of animals eat roots thus prepared more easily than when sliced in a machine; since by being left in grains by the mallet, and these grains often cohering, the animal can the more readily seize them than when cut by a machie.

Carrots *vs.* Oats for Horses.—I have worked a horse all winter long on *carrots* and *hay*, with better health, with equal effectiveness and with less expense than on *hay* and *oats*. All horses will not eat them readily at first, especially if mashed fine with a mallet. But all will soon learn; then they are never clogged by them. I think parsneps are equally good; certainly they are equally acceptable to the horse. I leave it to chemists to ascertain the relative proportions of starch and sugar, of phosphates and of nitrogenous matter in each. Carrots are the best root we have for late spring feeding, as they keep better than turneps and most other roots on the approach of hot weather.—With good hay and carrots the horse will hardly feel the want of fresh grass. C. E. G.

Structure of the Horse.—Sir Charles Bell observes that of all creatures the horse has the smallest stomach, relatively to its physical size. Had he possessed the quadruple ruminating stomach of the ox, he would not have been, at all times, ready for exertion; the traveller could not have baited his steed and resumed his journey. The stomach of the horse is not so capacious, even when distended, as to impede his wind and speed; and the food is passing onward, with a greater degree of regularity than in any other animal. A proof of this is that the horse has no gall-bladder.

Answers to Inquiries.

Osage Orange.—D B. W., Mendham, N. Y.—The seeds of this plant may be first scalded by putting them in water near the boiling point, where they may remain till the water is cool, and then plant them in beds of good soil. Most of the seeds will vegetate the first season. The plants may be transplanted from the seed bed the second season, and may be set in a hedge form at the distance of a foot apart. They should be kept clean from weeds, and in the fall headed down to within two or three inches of the ground, and the growth of the next season cut to within fifteen or eighteen inches of the ground.

Eagle Plow.—G. B., Montgomery Co., Va. The Eagle plow is well adapted to strong soil; but our acquaintance with the Livingston county plow, is not such as qualifies us to say whether the former would be preferable for *all soils*. We should have no hesitation in recommending the Eagle No. 2 for "very strong lands."

Madder.—A. V. L., Newcastle, Del. Madder roots can probably be obtained in the fall from Mr. J. Eaton, of West-Winfield, Herkimer county, N. Y.—For his account of the cultivation of this plant, see Cultivator for 1847, p. 55.

Rose-bug.—"Fairfield County, Ct."—Where these insects infest small plants or shrubs, they may be shaken into vessels of water, and afterwards killed.—Where they attack large trees, as the apple or cherry, or grape-vines, they are more difficult to manage. R. Newton, of Worcester, Mass., states in the *Horticulturist*, that he had effectually driven them from his trees, where they appeared in great numbers, by scattering dry wood ashes among them, with a transplanting trowel or a shingle paddle. Turning up the ground under the trees or shrubs where they have appeared, with the plow or spade, late in the fall, will expose many of the insects to the frost and air, while they are in the larva state, and they will be destroyed. The eggs are deposited from two to four inches in the ground, and the insect passes the three first stages of its existence below the surface.

Quinsey or Sore Throat in Swine.—N. W. B., Nashville, N. C. It is not easy to determine what the cause of this disease is, in all cases. Allowing hogs to eat acorns of the black and red oaks, is thought to produce it sometimes. Physic the animal with salts and molasses—two ounces of salts with two table-spoon fulls of molasses for a dose. Or give a mixture of sulphur, charcoal, and wood-ashes, allowing the animal to eat the mixture at will. The salts and molasses, diluted with water, can be forced down the throat with a syringe.

Washing Machine.—J. F. L., Macon county, Mo. There have been a vast number of washing machines invented, but far the greater portion are known only among the things that *were*, and of those that exist, there are few of any real utility. We are not sufficiently acquainted with the different kinds, to say which is best. A friend uses one called the "steam rotary washing machine," which app ars to be quite effective, and does not wear the clothes—price $15. But we should be glad to learn from those who have had *actual experience* in the business, what machines are best on the score of utility and cheapness.

Multicole Rye.—In answer to several inquiries, we will say that a supply of this grain will be kept for sale by Mr. Emery at the Albany Agricultural Warehouse. We believe the variety sustains its reputation for productiveness.

Water in Barn-Yards.—"A Subscriber." There is no difficulty in bringing the water from a spring 30 feet higher than your yard, though there may be a valley between, ten feet lower than the yard, provided the water is confined in a pipe. The water would run by simply placing the pipe in the spring, but to insure its always being kept full, it would be better to raise a head by a cistern or vat. Pipe of three-fourths of an inch bore would be large enough to carry water for twenty head of cattle, or more, and lead-pipe would cost here from twelve to fifteen cents per foot.

Seeds of Thorns.—P. P. P., Bradford Co., Pa.—The seeds of thorns generally vegetate well, if they are well ripened. They are, however, slow in sprouting, on account of the hard shells in which they are enveloped. On this account it is common to scald the seeds by pouring boiling water on them just before they are planted. This causes them to vegetate much quicker than they would do if put in the ground dry. If planted without any preparation, they will not all come up before the following spring, that is, they will lie in the ground a year.

Clod Crusher.—C. S. W., Dutchess Co., N. Y.—We cannot say whether such an implement is made in this country. Mr, D. T. Burrall, of Geneva, N. Y., proposed some time since to make one on the plan of Crosskill's—the one noticed in the English papers—but we have never learned whether he has done so. We think it would prove a very useful implement on compact soils.

White Daisy, or "White Weed."—(*Chrysanthemum leucanthemum.*) J. B. Watertown, N. Y. Where there are but few plants of this kind, it is best to dig them up, root and branch. If meadows are overrun with them, prevent their seeding by mowing as soon as the blossoms appear. In tillage land, kill them as you would any other bad weed, and if they are very numerous, it is advisable to keep the ground in hoed crops for two or three years, during which, if due attention is paid, they may be nearly exterminated. At all events prevent their seeding, as it is from seed only they are propagated. If mowed green and well cured they make hay that is not disliked by cattle and horses. If they ripen, the seed falls to the earth and vegetates, or goes with the hay to the barn or stack, gets into the manure and is returned to the land. It is in this careless way that the pest is continually renewed and increased. Top-dressing meadows with manure that contains no foul seed, and in every way encouraging the growth of grasses and white clover, will, with the above precaution, drive out the daisy in a few years.

The Locust.—A correspondent in Chester county, Pa., asks whether any new light has appeared in regard to the natural history of the locust. The insect called by that name in this country is not a locust—the real locust being a very different insect, closely allied to the grasshopper—both being included by Linnæus in the genus *gryllus*. What is improperly called locust in America, belongs to the group *cicada*, its specific name being *septendecim*, from its period of life being seventeen years. In its character and habits it differs widely from the true locust. Except for a few weeks at the latter end of its existence, the cicada lives entirely under-ground, feeding on the roots of trees and plants. During the short time it appears on the surface of the earth, it eats nothing, and it does no damage to vegetation while in the perfect or winged state, except in furrowing the limbs of trees to form cavites in which to deposit its eggs. As soon as the eggs hatch, the insects leave the trees and pass into the earth, groping in darkness for the long period mentioned.

The locust (or grasshopper) lives but a single season—not *in* the ground but on the surface or in the air, and its ravages are committed on the tops (not on the roots) of plants. The dreadful havoc which has been produced at various periods by the locust, in some districts of the Old Continent, has given rise to considera-

ble alarm in this country—the cicada above described being confounded with the true locust. But those devastations were produced by some of the grasshopper family. We have several species in this country which Dr. HARRIS calls locusts. What is commonly called the red-legged grasshopper, he calls the red-legged locust. It prevails extensively and is often very destructive to vegetation.

It is a well known fact that the *Cicada septendecim*, appears in different places in different years, though it is only seen on the same spot or in the same neighborhood, once in seventeen years. The fact is of great interest to naturalists, and we are pleased to see that it is attracting considerable attention.

Diseases of Animals.

HEAVES IN HORSES.—I have been acquainted with this disease practically for many years. I think it can never be cured, nor much alleviated by medicines. I am assured, on what I consider good authority, that removal to western Ohio is a certain remedy. I once drove a heavy horse twenty years old, through a journey, going and coming, of eleven hundred miles, in the months of May, June, August and September. The whole was accomplished with fair speed, and a good degree of comfort to man and beast, by the observance of one short and simple rule. *Avoid dust.* The manger and rack were usually dusted, the hay shook and sometimes watered, and the oats wet before the horse was allowed to approach them. "A good deal of trouble," says one. "Yes," I answer, "and a good deal of comfort, too, both to horse and traveller." The worst predicament was in travelling a dusty road with a light breeze blowing in the direction of the journey. Then the poor creature suffered, of course. C. E. G.

RED-WATER IN COWS.—We are informed by the Danville (Va.) Register, that not less than 300 cows have died in that vicinity, from the disease called red-water. It is a malady we have never met with, and we are not prepared, from our personal knowledge to "throw any light upon it." According to veterinary works there are two kinds of red-water—acute and chronic. *Cole's Veterinarian* describes the latter, (which is probably the kind above alluded to,) as follows:

This is most common in cows of weak constitutions, and in calves. In the first stages, it is far more a disease of the digestive organs than of the kidneys. The following causes are assigned: relaxed vessels; thin blood; cold; change from poor to rich pasture; luxurious pasture for cows recently dried, and scarcity of water in a long, dry summer. Some of these are only secondary causes, and there are doubtless various other primary causes, among which is the want of exercise.

Symptoms. The urine is of a brown color, or brown tinged with yellow. The beast feeds nearly as well as before, but ruminates more lazily. In a few days a natural diarrhœa comes on, and then the animal is well again; or a purgative is given and a cure is soon effected.

At other times the animal is dull, heavy and languid; the ears droop, the back is bowed, she separates from the herd, refuses food and ceases to ruminate. Again she is better, and then suddenly changes to worse; the urine assumes a dark color, resembling foul coffee or porter; it increases, in quantity, and is sometimes discharged with difficulty and in little jets. The milk diminishes, and acquires a tinge of yellow or brown, and the taste is unpleasant. The pulse is accelerated to sixty or seventy beats a minute. The skin is yellow, but of a darker yellow than in jaundice; it has a tinge of brown. The urine becomes of a darker hue, and is almost black. Sometimes the animal shrinks when the loins are pressed, but not usually, nor so much as in acute red-water. There is a loss of condition and general debility, and the legs and ears are cold. In every stage there is costiveness very difficult to remove, yet generally there was violent diarrhœa at the beginning, which suddenly stopped. The dark color of the urine is caused by vitiated bile, not by blood, as in acute red-water.

An examination, after death, shows that the contents of the *manyplus*, or third stomach, are perfectly dry and almost as hard as though they had been baked.—This is doubtless the disorder which many farmers call *dry belly-ache;* and some call it dry murrain. The liver is inflamed, and darker than usual; the gall-bladder is full to distention, and the bile is thick and black. These circumstances show that the seat of the disease is in the liver, and that the gall is obstructed in its passage to the intestines; and indigestion is the result.

Remedy. As in this disease constipation of the bowels is generally obstinate, back-rake, and give an exciting injection; then give a good dose of physic, with ginger, or other stimulant, and if there be no operation in six or eight hours, repeat, in half doses, and continue mild injections occasionally, until an operation of the physic. Give also warming teas, such as sage, peppermint, &c. Feed on laxative food, and give astringents, as for jaundice, to restore the digestive organs to their usual tone and action. We think that ashes and cider would be excellent. Saltpetre, in doses of an ounce, is good. Change the food, and remove all cause of disease. Small doses of sulphur are good.

BLACK-LEG IN CALVES.—At a recent discussion of this subject by a Farmers' Club in England, it appeared to be the general opinion that hay which was badly heated in the mow or stack, rendered calves which fed on it particularly liable to black-leg. It was agreed that they should not be stunted in their growth—should have clean, sweet fodder (or grass) with a little meal of some kind of grain, or oil-cake, and potatoes, turneps or carrots.

New-York State Ag. Society.

The Executive Committee met at Buffalo June 22d. They selected the ground and made other preparations for the Society's Show and Fair, to be held at that place on the 5th, 6th, and 7th of September next. *Superintendents* have been appointed to take charge of the different divisions of the show. It is expected they will be on the ground and will give proper directions in regard to placing and arranging the various articles and animals. This course will prevent confusion, and greatly simplify and facilitate the operations of the society.

A pamphlet containing the list of premiums, together with the names of the adjudging committees, and all the accompanying regulations, has been published, and may be had (gratis) on application to the Secretary, at the Society's room, Albany.

We are pleased to see that the people of Buffalo and the western portion of the state, manifest a praiseworthy spirit in advancing the objects of the Society. We confidently expect a superior display of the products of our own state; and owing to the favorable position of Buffalo for being reached from the Western States which border on the lakes, and also from the Canadas, we presume there will be a large turn-out of "men and things" from those sections; and in every aspect, we anticipate an exhibition creditable to the Society and the people contributing to it.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Communications have been received since our last, from A. V. L., D. B. Williams, A. C. Richard, Fairfield County, A. B., W. Bacon, Edward Clark, James Flore, A Subscriber, Dr. Charles Hamilton, W. N. Green, L. L. H., M. W. Philips, C. S. W., S. Smith, J. B., H. Grath, Jr., A. B.

Books, Pamphlets, &c., have been received, during the past month as follows: "Patent Office Report for 1847," and "Speech of Hon. J. I. Slingerland, on Internal Improvement, the War, and Land Monopoly," from Hon. Mr. Slingerland.—"Transactions of the Mass. Ag. Societies for 1847," from J. W. Lincoln, Esq.

School of Applied Chemistry.—We would call particular attention to the advertisment of the school under the charge of Profs. Silliman and Norton, at New Haven. The agricultural department is under the direction of Prof. Norton, who has been favorably known to the readers of the Cultivator for several years, and who, we are confident, has, by his writings, secured the approbation of the thinking, practical portion of the farming community. The school has been in operation for nearly a year, and we have heard it spoken of in terms of high commendation by those who are competent to judge of its character. It will be seen that Profs. S. and N. will undertake such analyses and investigations as may be entrusted to them.

Fine Raspberries.—We have received from Chauncey Copley, agent for the Society of Shakers, at Watervliet, some beautiful samples of the Fastolff, Antwert, Ohio ever-bearing, and Ohio yellow raspberries. They are all very fine kinds, and decidedly the best specimens we have seen this season. The Society is paying much attention to the culture of fruit, and will have the stocks of the kinds mentioned for sale this fall or next spring—together with the best varieties of the strawberry.

Walcheren Cauliflower.—We have received from Mr. James Wilson of this city, a couple of very fine heads of this superior variety of cauliflower. It has lately been introduced here from Germany. There are two kinds—the early and late. That received from Mr. W. was the former. The seed was sown in the Green House, in March, and the plants set in the garden as soon as the state of the ground would permit. The heads were cut on the 30th of June—were very close and full, and of a quality and flavor unsurpassed. We have no doubt the variety will prove an acquisition to our list of culinary vegetables. In the *Horticulturist*, vol. ii, p. 463, Mr. Downing has very favorably noticed both the early and the late Walcheren cauliflower.

A good Horse.—A correspondent writes—"You remember my old bay horse. The other day I drove him a mile on the trot before a buggy with three men in it, fairly within four minutes, a measured mile. He is *seventeen* years old—is perfectly sound, and has done a hard spring's work at the plow. He was fat on grass, never had a mile of training—having been taken out of the pasture the night before. It was after having driven him seven miles, that I drove him between the seventh and eighth mile stones in the time mentioned."

Yield of Butter.—In the year 1844, six cows belonging to George Vail, Esq., of Troy, produced in thirty days, 262 lbs. 9 oz. of butter—averaging 43 lbs. 12 oz. for each cow. The same year Philip Van Benscoten, of La Grange, Dutchess county, produced in thirty days, from five cows, 227 lbs. of butter, averaging 45 lbs. 6 oz. for each cow.

Farmers' Club.—We are informed by Charles Betts, that a Farmers' Club has been formed in the vicinity of Redford, Mich., in which the farmers manifest a deep interest, and which has already been the means of awakening a spirit of improvement that cannot fail of being useful.

Wheat and Rye in Virginia.—M. Davis, Esq., of Lynchburg, Va., writes—"We have just cut a good crop of wheat—the best we have had in this region for several years. Rye was once thought the surest crop we could put in the ground; but for a number of years it has failed to such a degree that few persons sow it, and nobody seems to be able to tell the cause of the failure."

Foreign Wool Trade.—We have accounts from the great Breslau wool fair of June 9th. The whole quantity of wool offered was 59,000 cwt., 20,000 cwt, of which remained unsold at the close of the fair. The prices were considerably below those of last year. The best selected lots of Silesian (or Saxon) wool brought from 90 to 110 dollars per cwt.; the "fine" 60 to 68; the "middle fine," 50 to 55; and the "low" 26 to 30. The fleeces were prepared in the best condition.

Wool Trade.—The *British Farmers' Magazine*, speaking of the supplies of wool from the Western states, says, "Until they are got up with more care, better washed, and more evenly graded, we see little prospect of a profitable result."

Crops in Ohio.—The *Ohio Cultivator* states that the wheat crop of that state is remarkably fine. Corn was, (on the first of July) backward. Grass not generally heavy—but pretty good. Potatoes promise a healthy crop—"especially where planted early." Fruit generally abundant. In the Western Reserve, the *rose-bugs* have injured the fruit trees very much.

Steam *vs.* Horse-power.—A gentleman has challenged the Great Western Railway Company to match a horse against a steam engine for half a mile—the engine to travel on the rail, the horse on the Reading race course parallel to the railroad. Speculation runs high on the issue. The editor of the *Mark Lane Express* offers to back the horse.

Turnip Meal.—A kind of meal made from turnips has been introduced in Scotland. It is made by passing Swedish turneps through a potato starch mill. After having been passed through the washing machine, they are ground down by the rasping apparatus, and the pulp is passed between rollers which squeeze out the greater part of the moisture. The squeezed fibre is then dried on a kiln and ground into meal by mill stones. The liquid which is expressed is evaporated, and the dry solid part is mixed with the meal. The meal therefore contains nearly all the solid parts of the turnip in a state which prevents decay, and in a light and portable form. It is confidently expected that this article will prove a good substitute for grain to feeding stock in that country. Prof. Johnston, on analysing it, found it to contain 13.68 per cent. of protein compounds, 48.72 of sugar, 4.14 of gum, and 1-11 per cent. of oil.

Saline food for animals.—The tissues of the body contain various saline principles, as soda, iron, sulphur, phosphorus, lime, &c. They are derived from the food and drink. The bones are formed in a great degree of phosphate of lime, and it is of the greatest

importance that young animals, in particular, should be supplied with food capable of yielding this substance in proportion to the regularly increasing demand of the system. *Milk* is in this respect a perfect food, and may be said to be the most proper substance, that can be given. The effect of not duly supplying animals with their suitable food, may have been seen in pigs which were kept in pens, not allowed to come to the ground, and fed with weak slops and vegetables. Their bones are frequently weak, as is shown by their crooked legs, which are unable to support the body. Give them milk, and allow them an opportunity to take proper exercise, and they will speedily improve—the bones becoming firm and strong.

Soiling.—Sir John Sinclair in his "Husbandry of Scotland," remarks that "Milch cows give more milk when soiled than when pastured, provided due attention is bestowed in furnishing them with a regular supply of grass at stated periods—say six times each day—and keeping them clean and free from nastiness."

Cost of Fences.—Nicholas Biddle once remarked that the cost of fencing alone in the state of Pennsylvania, would pay the state debt, about forty million dollars.

A Rochester Mill in Spain.—John Eggleston, of Rochester, has furnished a model mill, to be copied in the erection of a flouring mill at Bilboa, in Spain.

Windham County, Vermont.—Next fair of the Agricultural Society will be held at Fayettville, on the 5th and 6th days of October next. The officers of this society are, Daniel Kellogg, President; Chas. Chapin, Emory Wheelock, Vice Presidents; Chas. K. Field, Treasurer; John Tufts, of Wardsboro, Secretary. A very judicious premium list has been published, and we presume the exhibition will be creditable to the intelligent citizens of the section.

Turneps *vs.* Potatoes.—Boussingault, in his work on Rural Economy, tells us in his "Elements of Crops," that the Turnep is the most watery root he has examined, and that by desiccation he found out of one hundred parts of fresh turnep, ninety-two and a half parts were water; whilst by a similar process he found that from one hundred parts of fresh potato only 76 parts were water. The elementary constituents of the two kinds of vegetables were very similar: according to these analyses of Boussingault's you will perceive that, weight for weight, the "raw" potato exceeds more than three times the nutritious properties of the turnep—or, in plain figures, 3.2 times.

Chemistry and Agriculture.—Within the last year or two, we have seen frequent notices of the investigations of Kuhlman, of Paris, in relation to the connexion of chemistry with agriculture. A volume has lately been published embracing the results of his researches on the subject. This we have not seen, but from a review of the work which we find in the Scottish Quarterly Journal of Agriculture, we learn that the leading object of the author was to ascertain facts in regard to the operation of substances used as manures. For this purpose he instituted a series of experiments with many different articles. The trials appear to have been fairly conducted, and with a sole view to the elicitation of truth. Some of the conclusions to which his results have tended are as follows:

That the value of manures may be ascertained by the quantity of azote or ammonia they contain: that the phosphates did not produce the same invigorating or stimulating effect as the azotised manures, though their action was more lasting than the latter: that there seems to be a limit to the beneficial action of ammonia, as a superabundant application actually decreases the produce.

The reviewer observes:—"Unlike many agricultural writers of the day, Kuhlman has drawn all his conclusions from experiment; he has not, like them, *commenced with his theory*, and twisted all his results to make them agree with the preconceived opinion. On the contrary the experiments are fairly tried; and the deductions so modestly drawn, that every reader must feel himself compelled to agree with them, notwithstanding they differ from the expressed opinion, that plants derive all their azote from the air. Against *this opinion* we may place the conclusion at which Kuhlman has arrived, from careful and laborious experiments, namely,—'That if the air can supply sufficient azote for vegetation, *we can double that vegetation by the addition of azote to the soil.*'"

The Wheat Crop at the West.—The *Prairie Farmer* of July, says—"The present prospect for the wheat crop, and indeed for all other crops, has not been better since the settlement of the northwestern country. Notwithstanding the ravages of the Hessian fly in the fall, and the damage done by the winter, there bids fair to be a tolerable crop of winter wheat, even in the most unfortunate districts; while in those not affected by these visitations, the present promise was never better. The proportion of good weather has been so large that fields which seemed past hope in the early spring, now promise a fair yield. Contrary to our expectations, the Hessian fly has hardly been heard of this spring. We looked for his disappearance after the present season, but did not anticipate exemption quite so soon. The prospects of the wheat crop, in the southern belt of the northwest, including a strip say three hundred miles wide, lying north of the south end of this State, has not been otherwise than good. Its present keeps pace with its past promise. The northern belt, extending from the southern extremity of Lake Michigan to the northern limit of Wisconoin, suffered more or less in the fall and winter, from the causes alluded to. Within this belt, spring wheat not only makes up for whatever deficiency there might be in the winter crop; but from past failures, has become a vast crop of itself. Perhaps so much of this was never before put in as the present season. Taking altogether, the dark shades are few and unimportant. Still there are many risks yet to be run. Through the State of Ohio, also, the crops never gave better promise. The corn crop is, if possible, fairer than the wheat, with us: and according to present indications, will be much larger than ever before May there be no disappointment.

A Cold Well.—A letter was lately read before the Natural History Department of the Brooklyn Institute, describing a singular phenomenon connected with what is called "the deep well," near the village of Owego, N. Y. It is seventy-seven feet deep to the surface of the water, and was excavated twenty-five years ago. Two years after it was dug, the water became frozen in the winter, and it has been frozen every severe winter since. Two years ago a lump of ice was drawn out of the well in July. In the month of June last there was only two feet of water, and its temperature was 40°

Californian Horses.—We have seen it stated that Com Stockton has taken measures to introduce to the United States, some of the breed of horses called *canalos*, with which Col. Fremont performed his wonderful feats in travelling, noticed in a previous number.

Farm of the Kings County Alms-House.—Attached to the Alms-House is a farm of 113 acres, 70 of which is the property of the County; the additional 43 acres have been leased for a term of 7 years, at $6 per acre, by the Superintendents. The products of the farm during the last year were as follows: Wheat, 190

bushels ; Oats, 360 bushels ; Corn, 1,100 bushels ; Potatoes, 1,100 bushels ; Beets, 390 bushels ; Turneps, 400 bushels ; Onions 150 bushels ; Flax, 300 lbs ; Cabbages, 3,500 heads ; Celery, 2,000 heads ; and a large supply of garden vegetables. Pork, 4,205 lbs ; Calves, 5 head. There was harvested also 86 loads of Hay and 20 acres of Wheat. There was made in the house, for the use of the inmates during the year, garment pieces No. 3,214 ; Stockings Knit, 624 pair ; Shoes made, 91 pair ; Shoes repaired, 118 pair ; Thread spun, 30 lbs ; Coffins made, 114 ; Iron Bedsteads for Asylum and Hospital, 43. The amount of stock on the farm on the 31st July, 1847, was—8 horses, 8 cows, 2 oxen, 1 bull, 62 swine, 200 poultry. During the year there were 32 births, and 111 deaths. The number of persons supported for the year was 7,185 ; number temporarily relieved, 5,955.—*Tribune.*

Notices of New Publications.

TRANSACTIONS OF THE NEW-YORK STATE AGRICULTURAL SOCIETY FOR 1847.

This is a volume of about eight hundred pages, comprising full details of the ordinary doings of the Society for the last year, together with Reports from most of the County Societies in the State. It contains also many valuable papers communicated to the Society ; among which are two from Prof. JOHNSTON, of Durham, (Eng.) one on the use of Bones as a Manure, and the other on the Composition of a Water found very useful in Irrigation ; an article on the Currant Moth, illustrated with a very handsome steel-plate engraving, by Dr. A. FITCH ; Agricultural Schools, by S. LUCKEY, D. D. ; Subsoil Plowing, by JOHN MALLORY ; the Potato Disease, by Rev. C. E. GOODRICH ; Silk Culture in America, by Dr STEBBINS, &c. The volume contains a great amount of really valuable matter. We have already given abstracts of some of the articles, and shall notice others.

VERMONT STATE AGRICUTURIST.—We have received the first number of a publication with this title issued at Burlington, Vt. As the name implies, it is to be devoted to the interest of agriculture, and for this purpose it will seek to collect and disseminate information of a practical and scientific character. It is announced that the services of Professor PHELPS, of Windsor, have been secured for the departments of Chemistry and Physiology, and those of Professor TORREY, of the University of Vermont, for the Botanical department. It is to be published monthly by CASPAR T. HOPKINS and D. W. C. CLARKE, the former of whom has the editorial charge of the work. We trust it will prove a useful aid in the good cause which it advocates. It is a quarto of sixteen pages—terms $1 a year.

AMERICAN JOURNAL OF SCIENCE AND ARTS.—The number of this work for July is received. As usual, it is filled with valuable matter relating to subjects belonging to its oppropriate sphere. We notice an interesting article on the variations of the level of lake Superior, by Prof. W. W. MATHER ; the Orbits of the Asteroids, by B. A. GOULD ; the Benificent Distribution of the Sense of Pain, by G. R. ROWELL, &c. Published at New Haven on the first day of every second month, at $5 per year. Edited by Messrs. SILLIMAN and DANA.

THE FARMERS' LIBRARY.—We learn from the June number of this work, that its title is to be changed to that of "THE PLOW, THE LOOM, AND THE ANVIL."—Mr. SKINNER, the able editor, has purchased the establishment, and has made arrangements with ZIEBER & Co., of Philadelphia, for its future publication. We do not understand that the plan of the work is to be essentially altered, except that it will more especially advocate a "cordial alliance and mutual support among all the great branches of American Industry." It is to be published monthly, at three dollars a year. We wish it success.

THE PLOW, THE LOOM, AND THE ANVIL.—Since the above has been written, we have received the first number of this work. It contains seventy-two pages, octavo, well filled with valuable matter. The principal portion relates to agriculture and various branches of manufactures, and to the relation they sustain to each other ; but there are several pages of useful information under the heads "Miscellaneous Scraps," "Readings for Mothers and Children," &c. The work is neatly printed and in all respects makes an attractive appearance. Edited by J. S. SKINNER & SON, and published by G. B. ZIEBER &Co., Philadelphia.

Domestic Economy, Recipes, &c.

To make good yeast in summer, is a desirable object with every housewife. She may have such by the following simple process:

Boil a single handful of hops (which every farmer ought to raise, to the extent of household wants,) in two or three quarts of water—strain and thicken the liquor, when hot, with rye flour ; then add two or three small yeast or turnpike cakes, to set the mass. If this is done at evening, it will be fit for use early next morning. Reserve a pint of this yeast, which thicken with Indian meal, make into small cakes, the size of crackers, and dry them in the shade, for future use. In this way the yeast is always fresh and active. Yeast cakes kept a long time are apt to become rancid, and lose their virtues. The fresher the cakes the better the yeast.

To make Currant Jelly.—Take the juice of red currants and white sugar, in equal weights. Stir it gently and smoothly for three hours, put it into glasses, and in three days it will concrete into a firm jelly.

GREASE FOR MACHINERY.—Oil, sulphur, and vulcanized caoutchoe, in composition, is said to be superior to any thing known.

PRICES OF AGRICULTURAL PRODUCTS.

New-York. July 15, 1848.

FLOUR—Genesee per bbl. $5.25—Georgetown $6.

GRAIN.—Wheat, southern, per bu., $1 21—Ohio $1 12—Corn, northern, 53*a*54c.—Rye, 68c.—Barley 60*a*65c.—Oats, 42*a*43c.

BUTTER—Orange County, per lb., 16*a*18c.—Western, dairy, 14*a*16 c.

CHEESE—per lb., 6*a*7c.

BEEF—Mess, per bbl., $11.50*a*$12.00—Prime $6.12½*a* $6.50.

PORK—Mess, per bbl., (new.) $17.50—Prime, $8.12½*a*$9.19½

HAMS—Smoked Western, per lb., 5½*a*9c.

LARD—in kegs, per lb., 7*a*7¾c.

HEMP—Russia clean, per ton, 225*a*$230.—American dew-rotted. $130*a*$135.

HOPS—First sort, per lb., 4½*a*5c.

COTTON—Upland and Florida, per lb., 5*a*7½c.—New Orleans and Alabama, 5*a*8½c.

WOOL—(Boston prices.) July 15.

Prime or Saxon fleeces, washed per lb.....		42*a*45	cts.
American full blood fleeces,.....		38*a*40	"
"	half blood do	30*a*32	"
"	one-fourth blood and common,.....	28*a*29	"

☞ There is no foreign demand for flour, and but little for Indian corn or meal. Foreign accounts represent the prospect for grain crops as favorable. The potato disease had not appeared in the growing crop, which was promising. In the south of England new potatoes had been brought to market, and were selling at moderate prices. The wool trade in Europe is rather depressed, but considerable purchases were made by the English manufacturers at the late Continental fairs, and a revival of business in this line was anticipated. The wheat crop in this country is generally abundant.

WHEELER'S PATENT HORSE POWER AND THRESHER.

THE above machines having attained a wide introduction among all classes of Farmers and Mechanics, and having without exception, given the fullest satisfaction, we do not hesitate to recommend and warrant them to any and all wishing such machinery—For prices, particular recommendations, &c., see the Albany Cultivator for February, 1847 and 1848, also for May, 1848. Also Catalogue, gratis, at Store, Nos. 10 and 12 Green st, Albany, or by mail.

HORACE L. EMERY.

General agent for the manufacturer, wholesale and retail.

JOHN MAYHER & CO.,

UNITED States Agricultural Warehouse, No. 195 Front one door South of Fulton Street, N. York City.

Where they have for sale over 200 different patterns and sizes of Plows, of the most approved kinds, and suitable for all kinds of soil, together with the most extensive assortment of Agricultural Implements ever offered for sale in the city of New-York, which will be sold at lower prices than they can be purchased at any other establishment. Purchasers will do well to call and examine their stock before purchasing elsewhere. Among the plows advertised will be found J. Mayer & Co.'s celebrated and unequalled First Premium Plow, without doubt the best and cheapest plow to be had in the United States.

N. B. Castings of all kinds made to order.

New-York, August 1, 1848 —tf.

EAGLE PLOWS.

NO Plow has been so long before the public with so few alterations, come into so general use, or received so many and so high grade premiums, as the genuine Eagle Plow, made by the inventors, Messrs. Ruggles Nourse & Mason.

Notwithstanding the great diversity of soils, modes of culture, and the constantly increasing competition, and being subjected to the most thorough and persevering trials ever had in this country, the Eagle Plow still stands at the head of the list for excellence of work, materials, durability, workmanship, ease of draft, and price.

Some of its merits over other kinds in use, are that the metal is of such a mixture of irons as gives them strength equal to malleable iron and admits of the chilling process on all the wearing parts, which causes them to wear sharp, and do three to five times the amount of work, as the ordinary kind of plow casting—while the risk of breaking is not increased by the process

All sizes of the above plows constantly on hand at wholesale and retail, at manufacturer's prices, at the Albany Agricultural Warehouse, Nos. 10 and 12 Green St, Albany. All plows warranted.

For prices description, &c., see Catalogue, gratis at Store or by mail. H. L. EMERY.

GREATEST IMPROVEMENT OF THE AGE.

Smith's Lever Drill.

Patented November 4, 1846, to H. W. SMITH.

THE advantages of this machine as fully established by use and experiment, are

1.—A saving of from two to three pecks of seed per acre.

2.—An equal distribution of any given quantity of seed, covered at a uniform depth.

3.—A saving of labor; a boy and team, with this machine, can complete from 8 to 10 acres per day; and the surface of the soil is left in such a position that it does not encrust, and undergoes a constant course of natural cultivation by the action of every shower, so that the gases and atmosphere readily penetrate,—hence,

4.—The grain is not so liable to be thrown out by frost.

5.—It stands firmer and stronger, and is not so liable to be injured by rust or the fly.

6.—Where these machines have been used, the saving of seed and increase of product, amounted to from 20 to 25 per cent.

The great improvement in this machine, over all others of the kind, is its simplicity, durability and economy, and the facility and certainty with which it can be *set* or *altered* by a regulated *index* and *guage* to drill or plant any given quantity of grain per acre, at any given depth.

These machines are now being made at Syracuse.

County rights to manufacturers sold on reasonable terms

For further particulars address the undersigned, post paid at Syracuse. C. MASTEN,

Aug. 1, 1848.—3t.

SALE OF STOCK AT BUFFALO.

I WILL sell at the State Cattle Show in September next, at Buffalo, about 30 thorough bred Short horns, consisting of cows, young bulls, heifers, and calves.

Also, 30 thoroughbred Devons of like description.

Also, 30 " Cotswold Sheep, (long-wooled) ewes & rams.

30 " Southdown Sheep, (middle-wooled) of same sexes.

Catalogues and pedigrees of the stock will be on the show grounds where the animals will be exhibited.

The character of my stock is generally known—and I shall offer it all indiscriminately to the public, making no reservations for my own use.

Black Rock, June 13, 1848—2t. LEWIS F. ALLEN.

SCIONS FOR BUDDING,

At low prices,

FOR Sale by J. J. THOMAS, at his nursery in Macedon, including most of the standard varieties of apple, cherry and peach, *all proved by bearing*, at $2 to $5 per 1000 buds, where quantities are taken, and an additional discount on large orders. Several new varieties of fruit furnished in smaller quantities at moderate rates. Bundles packed for sending by express, so as to keep fresh a week. Applicants stating the varieties and quantities wished, will be furnished with distinct prices. All communications to be post-paid, and orders to be accompanied with remittances, or satisfactory references.

Address, J. J THOMAS, *Macedon, Wayne, Co., N. Y.*

July 1—2t.

SCHOOL OF APPLIED CHEMISTRY.

Attached to the "Department of Philosophy and the Arts," in Yale College.

B. SILLIMAN, Jr., Professor of Chemistry and the kindred Sciences applied to the Arts

J. P. NORTON, Professor of Agricultural Chemistry.

THE Instructors in this department have opened a commodious laboratory on the College grounds, where they are now prepared to receive pupils in special and general chemistry. The system pursued with those who design to become chemists or to study the science extensively, is thorough and complete. Such students always commence with an extended course of qualitative examination of unknown substances—and in due time pass through a series of varied quantitative determinations. To those who wish to follow special investigations connected either with the arts, agriculture or pure science, every facility will be afforded, both in organic and inorganic analysis.

Prof. B. SILLIMAN, Jr., will instruct particularly in general elementary and analytical Chemistry, Mineralogy and Metallurgy, with special reference to their application to the useful arts. He will also give a course of lectures on Mineralogy and Metallurgy, continued through the summer term. During the fall and earlier part of the winter, he will also carry a class through a course of elementary Chemistry, in elucidation of the regular course on this subject in the Academical department.

The instruction in the Professorship of Agricultural Chemistry is intended to unite, as much as possible, practical views with theory; to give the untaught farmer an opportunity to become acquainted with so much of science as shall enable him to reason upon his daily pursuits, and to understand the great principles upon which good cultivation must depend, presented in so plain a form as to be within the comprehension of all. Few chemical terms will be employed in the lectures, and those only of the simple explanations; they will thus be understood by those who have never devoted any attention to the subject. A regular course of lectures will be delivered in the winter of each year, commencing in January and continuing about two months, there being four lectures in each week. The subjects of the course will be—the composition and nature of the soil, the plant, and the animal—theories of rotation of crops, and of feeding—modes of draining—the different kinds of manures, their value and how beneficial—the improvement of waste land, &c. &c. Text-books will be indicated for study during leisure hours.

In connection with the lectures, will be a short course of elementary Chemistry, for such as wish to study somewhat more of chemistry than is given in the course, and to qualify themselves for making ordinary testings and qualitative examinations of soils, manures, &c.; this course will occupy two hours of five days in each week during two months.

The fee for the Lectures on Agricultural Chemistry will be $10. That for the Elementary Chemical Course, including apparatus and reagents, will be $25.

Students in Analytical Chemistry are allowed to work in the laboratory during the whole day; glass will be furnished, (with charges for breakage,) also the ordinary reagents and balances for the use of those who are so far advanced as to require them. There will be frequent recitations, and the students will receive the constant attention of one or both of the Professors. The fee for this class will be $20 per month.

The vacations will correspond with those in the Academical departments, viz:—six weeks from the third Wednesday of August; two weeks from the first Wednesday in January; and four weeks from the third Wednesday in April of each year. Sessions begin with the close of each vacation, and are in length respectively, 14—14 and 12 weeks.

Students in this school will enjoy all the advantages to be derived from the extended means of the Institution in Libraries, Instruments and Collections. The mineralogical and Geological collection is widely known as one of the best in the country, and there are smaller collections in the possession of the Professors. Those who desire it can have access to the Lectures on Chemistry, Mineralogy and Geology, by Prof. B. SILLIMAN, Senior, and to the Lectures on Natural Philosophy, by Prof. D. OLMSTED.

Instruction is also accessible in higher Mathematics, in Engineering and the use of Instruments in Philology, History, Oriental Languages and Belles Lettres.

The department of Philosophy and the Arts in Yale College, of which the School of Applied Chemistry is a part, has been organized with a view to meet the wants of those who desire to follow the studies embraced under it further than they are pursued in a collegiate course. Those who desire further information on this subject are referred to the annual catalogue of the Institution for 1847, '48.

A college education is not however required of those who become students under this department.

The Professors are always accessible to those who wish to consult them on matters relating to their several departments; and will undertake such analyses as may be entrusted to them. Letters of inquiry will be promptly attended to.

Analytical Laboratory, Yale College, New Haven, Aug. 1848.—6t.

ROCK SALT.

THIS Salt is hard as alum, and is the best known for stock, and is the cheapest and most economical—as it may be laid upon the ground, or in racks and mangers, where the cattle lick it as they may desire, without getting an excess, or suffering injury from its use. For sale in any quantity at the Albany Ag. Warehouse, Nos. 10 & 12, Green-st.

THE FARMER'S SONG.

I envy not the mighty king
  Upon the splendid throne—
Nor crave his glittering diadem,
  Nor wish his power mine own:
For though his wealth and power be great,
  And round him thousands bow
In reverence—in my low estate
  More solid peace I know.

I envy not the miser—he
  May tell his treasure o'er,
May heaps on heaps around him see,
  And toil and sigh for more;
I'd scorn his narrow sordid soul,
  Rapacious and unjust;
Nor bow beneath the base control
  Of empty gilded dust.

Let warriors mount fame's giddy height,
  Gain glory's gallant mead—
Be calm, collected in the fight,
  Where thousands round him bleed;
I envy not their victor wreath,
  Their courage nor their fame;
Their laurels are a fleeting breath,
  Their glory but a name.

Selected.

WM. R. PRINCE & CO.,

Sole Proprietors of the Linnæan Gardens and Nurseries, Flushing,

WILL transmit their NEW STRAWBERRY CATALOGUE, comprising every estimable variety, with descriptions, culture and prices, just published, to every post-paid applicant.

The following form a part only. The prices per 1,000 are greatly reduced. H denotes the Hermaphrodite, and P the Pistillate varieties. The varieties thus * designated are not in possession of any other nursery in this town or elsewhere. Strangers will enclose cash with their orders.

	Price pr doz.	pr 100		Price pr doz	pr 100
Scarlet & Pine Strawberries			Methven or Victoria, P	25	1 50
Abyssinian Prince, P	$2 00	$8 00	*Monstrous Swainstone, H.	2 00	10 00
Aberdeen Beehive, H	2 00	8 00	*Primate, H.	3 00	10 00
*American Scarlet P	50	2 00	*Primordian, P.	2 00	10 00
* " Prolific, H	50	2 00	*Profuse Scarlet, P.	3 00	5 00
*Bishop's Globe, P	50	2 00	*Prolific Hudson, P.	1 00	8 00
* Seedling, true, P	50	2 00	* " Swainstone, H	2 00	8 00
Bishop's Orange, true					
Black Prince, P	50	2 00	*Refulgent, P.	2 00	8 00
Boston Pine, H.	50	2 00	*Round White Carolina, H.	2 00	8 00
*Brilliant, H.	2 00	8 00	*Serena, H.	2 50	10 00
Burr's Seedling, H.	37	2 00	*Theresa, H	2 00	8 00
" Columbus, P	60	4 00	*Tivoli Scarlet,	2 50	10 00
" Late Prolific, P	1 25	8 00	*Unique Scarlet, H.	1 00	5 00
" Mammoth, H	1 00	6 00	*Prairie Strawberries*		
" New Pine, P	1 25	8 00	*Camak's Scarlet, H,	50	2 00
" Profusion, P	1 00	5 00	Iowa, H.	50	2 00
" Rival Hudson, P	60	4 00	Prairie Cluster, P.	50	2 00
" Se'rlt Melting, P	1 25	6 00	*Pistillate Keen, of Ohio.*		
" Sciota, P.	1 25	8 00	Taylor's Seedling, P.	50	2 00
*Charlotte, P.	3 00	10 00	Unique Prairie, P	50	2 00
*Chili, H.	3 00	10 00	*Necked Pine, of Ohio*		
*Cluster Hudson, P.	1 00	5 00	Willey, P.	50	2 00
*Cornucopia, P.	2 00	10 00	*Hautbois Strawberries.*		
Crimson Cone, P.	75	3 00	*Green, H.	50	2 50
* " Pine, H & P	1 50	6 00	*Large flat H'tbois, H	50	2 50
Cushing, H.	50	2 00	Prolific Hautbois, H.	37	1 50
Eberlein, H.	1 50	6 00	*Alpine & Wood Strawbrerries*		
*Eustatia, P.	2 00	10 00	*Besancon Alpine, H	75	3 00
*Globose Swainstone H	2 00	10 00	Redwood, (English) H	25	1 00
Hovey's Seedling, P	37	1 50	Whitewood, " H	25	1 00
Hudson, H & P.	25	1 50	Red Alpine, with runners, H	25	1 00
*Illinois, P.	50	2 00	White Alpine, do H	50	2 00
Jenney's Seedling, P	50	2 00	Red Bush Alpine, no runners, H.	50	2 00
*Ladies' Finger, H.	2 00	10 00	White Bush, do do H	50	2 00
Large E'rly Se'rlt, H	25	1 00	*Montevideo Pine.*		
*Le Baron, H	2 00	8 00	*13 Splendid varieties, each $5 per dozen		
Lizzie Randolph, P.	2 00	10 00			
*Magnate, P.	3 00	15 00			
*Magnifique, P.	3 00	15 00			

Fruit Tree Scions for budding.

WM. R. PRINCE & CO., Flushing, will supply these at the same prices as advertised in the Cultivator and Horticulturist of January last. Aug. 1, 1848.

FARM FOR SALE AT A BARGAIN,

CONTAINING Two hundred and thirteen acres, six miles west of Batavia, Genesee county; one hundred and sixty acres under good improvement; balance about equally divided in good rail and hard timber, with good sugar orchard. Soil good for grain or grass. Three large barns with stabling attached for fifty horses.—Story and half house, kitchen and wood shed attached. Buildings all nearly new and in good condition. Ten per cent. down, the balance can remain on a long credit. For any further information, address, (post paid,) H. HUNTER, Rochester City, N. Y.

July 1—ju. & sept.

HORSE POWERS.

FARMERS in want of good Horse Powers and Threshing machines, will find them at the Albany Agricultural Warehouse and Seed Store. For description and recommendations, See Feb. No. of Albany Cultivator, for 1847 & 1848—also May No., 1848.

Descriptive Catalogue gratis.

SALE OF SHORT HORNED CATTLE.

I WILL Sell at Buffalo, during the days of the State Fair, on the 5th, 6th and 7th September next, under the directions of the Officers of the New York State Agricultural Society, Twenty to Twenty-five thorough bred Short Horned Cattle, consisting of Cows, Heifers, and young Bulls A catalogue with their pedigrees will be ready at the time of the fair.

Also, I will sell at the same time, Fifty Merino Rams, bred from the Blakeslee flock, and six South Down Rams.

References—A. B. ALLEN, N. York; SANFORD HOWARD and B. P. JOHNSON, Albany; FRANCIS ROTCH, Butternuts; and L. F. ALLEN, Black Rock. JOHN M. SHERWOOD.

Auburn, May 16, 1848—4t

AMERICAN AGRICULTURAL WAREHOUSE AND SEED STORE.

S. C. HILLS & Co, No. 43, Fulton Street, (removed from 189 Water Street) offer for sale, Prouty's Ploughs and Horse Rakes, Mayher's and Moore's Ploughs, Corn Mills, Corn Shellers—Catchpole's very superior Stalk and Straw Cutters, Hovey's do. do., Grain Cradles, Churns, &c. &c. Also, Garden and Flower Seeds, raised by the Shakers, and warranted good; Fruit and Ornamental Trees and Shrubbery, supplied on short notice.

June 1, 1848.—3t

HYDRAULIC RAMS.

A COMPLETE assortment of these useful machines constantly on hand at the Albany Agricultural Warehouse, where one in constant operation may be seen. H. L. EMERY.

See the following *Certificate.*

I have used the Improved Hydraulic Ram since the latter part of October, 1847, and can recommend the same to all who may wish to be supplied with running water in a permanent and durable manner. The distance from my spring to my house is 56 rods; the elevation about 70 feet; the fall from the spring to the ram is 6 feet. I have more than enough water from a half-inch pipe to supply my house, and to water 50 head of cattle, and would not be deprived of the same for double what it cost. CLARK LEWIS, 2d.

German, Chenango Co., N. Y., April 15, 1848.

THE OLD MORGAN GIFFORD.

THE highest blooded Morgan Stallion, now remaining, will stand this season at the Stable of F. A. WIER, in Walpole, N. H.

Terms, $25, five dollars of which to be paid at the time of service, and the remaining $20 if the mare proves in foal. Pasturage furnished as usual.

FRED. A WIER. } Committee
ELISHA DEWOLF, Jr. } of the
AMBROSE ARNOLD, } Proprietors.

June 1, 1848—3t*

KINDERHOOK WOOL DEPOT.

THIS enterprise having met the expectations of its projectors, will be continued upon the following principles:

The Fleeces will be thrown into *sorts* according to *style* and *quality.*

A discrimination will be made between wool in good or bad condition.

All who desire it, can have their clips kept separate.

Sales will be made invariably for cash.

The charges will be, for receiving, sorting and selling, one cent per pound, and the insurance, which will be 25c. on $100 for a term of three months.

Liberal advances in cash made on the usual terms.

Arrangements have been made with Manufacturers using different grades of wool, to purchase the various sorts at their market value soon after being received at the Depot If the opening market price is not satisfactory, the wool will be offered for sale at such time as the owner may direct.

Reference can be had to

Dr. J. P. BEEKMAN, Kinderhook; D. S. CURTIS, Canaan;
C. W. HULL, New Lebanon; J. B. NOTT, Esq. Guilderland;
C. H. RICHMOND, Esq., Aurora; Col. J. MURDOCK, Wheatland,
B. P. JOHNSON, Esq., Sec., [N. Y.;
N. Y. St. Ag. Soc. Albany.

H. BLANCHARD, Agent.

Kinderhook, N. Y., June 1, 1848.—3m

IMPORTANT TO FARMERS, GARDENERS, AND FLORISTS.

A New Manure, Warranted Superior to any Other.

MR. BOMMER has on hand one hundred casks—500 lbs. each—of the celebrated "French Guano," an inodorous chemically prepared fertilizing Powder, adapted to every soil and all plants, and acknowledged in Europe as the best and most profitable manure ever known. Price of a cask, $5.

Families having small gardens or flowers, can be supplied with small bags containing 15 lbs. at 25 cents, or 36 lbs. at 50 cents, at his office 72 Greenwich-st., New-York city. April 1—tf.

VALUABLE BOOKS

For sale at the Office of the Cultivator:

HUDSON AG. WAREHOUSE & SEED STORE,

FURNACE BUILDINGS, HUDSON.

THE Subscriber offers for Sale, all kinds of FARMING IMPLEMENTS and TOOLS, GARDEN and FIELD SEEDS, on as good terms as at any other establishment.

Horse Powers, single and double Threshing Machines, with or without Separators, Plows of all kinds, including D. Prouty & Co's Centre Draft; sub-soil and side-hill Plows, Road Scrapers, Cultivators, Seed Sowers, (Pratt's), Straw Cutters, of various patterns, Kendall's Churns, Endless Chain Dog-Churns, Corn and Cob Crushers, Iron Rakes, of all sizes, Hay Forks, Manure Forks, Shovels, Spades, garden and field Hoes, Grant's Fan Mills, Scythes and Snaths, Ox Yokes and Bows, Ox Balls, Bull Rings, Grain Cradles, Grass Hooks and Shears, Bill Hooks, Scythe Stones, &c &c.

F. A. GIFFORD.

Hudson, May 9, 1848—5t*

NORMAN or MORSE'S GRAY.

THIS celebrated horse will stand the ensuing season at the stable of James Rice, in Germondville, three miles north of the village of Lansingburgh Norman is a beautiful dapple grey, 15¾ hands high, strongly made, and finely proportioned. He combines first rate trotting qualities, and great powers of endurance, with unsurpassed gentleness and docility. His colts are justly celebrated for speed, bottom and good temper—are eagerly sought after in the market, and command prices ranging from $150 to $500. The very high reputation of Norman's stock as "road horses," and the extraordinary prices they command, renders him by far the most profitable horse to breed from of any in the country. Gentlemen sending mares from a distance, may rest assured that they will have such attendance and keeping as the owners desire, and upon the most reasonable terms The horse will be under the charge of his former owner, Mr Morse. *Terms*—$10 the season Insurance to be agreed upon. Communications addressed, I. T. GRANT P. M., Junction, Rensselaer county, will receive prompt attention

April 1—4t.

16,000 IN ONE YEAR.

COLE'S American Veterinarian,

OR

DISEASES OF DOMESTIC ANIMALS.

A Book for every Farmer!

AND a book which every Farmer should own and may own, by paying the small sum of FIFTY CENTS, which may be the means of saving the life of many valuable animals, and from which he may derive a vast amount of the most valuable information in regard to the Training and Breeding of Animals, as well as full Rules for Restoring and Preserving Health.

16,000 COPIES

of this valuable work have been sold in ONE YEAR.—and we have testimonials enough in its favor, from those who have purchased and examined it, to fill a volume. We publish a few only.

"No Farmer's Library is complete without Mr. Cole's Treatise on the Diseases of Domestic Animals."

From William Bacon, Richmond.

This book is just what farmers want. The prescriptions are simple, always accessible, and harmless to the constitution.

From the Christian Herald, Newburyport.

It is truly "a book for every farmer." We have been most astonished at the amount of important information and instruction which it contains, on the training, breeding, and diseases of domestic animals. It is compiled by one of the best agricultural writers in the country, from his own experience and observation, as a practical farmer, and conductor of agricultural papers.

From Wright's Paper, Philadelphia.

"Cole's American Veterinarian," is an invaluable book. It is worth its weight in gold to any person having the care or charge of domestic animals. An agricultural friend, to whom we gave a copy, observed that it would save him a hundred dollars a year.

From the American Agriculturist.

The farmer will find much valuable information in this little work. By reference to its directions, they may be able to save a valuable animal, which otherwise might be lost.

From J. M Weeks, Vermont.

The American Veterinarian is the best book of the kind that I have eyer seen.

From Levi Bartlett, New-Hampshire.

This book should be in the library of every farmer.

From the Farmer's Visitor, by Gov. Hill, N. H.

As the Editor of that excellent agricultural paper, the Boston Cultivator, and other kindred works, Mr. Cole has sbown himself well qualified for the compilation of this work. We have known him for years, and he has proved himself to be one of the most persevering and able of our agricultural editors. We understand his new book has already had a free and extended sale. Many times its price to almost any farmer, may be saved in its purchase.

Published, and for sale at wholesale and retail, by

JOHN P. JEWETT & CO.
23 *Cornhill, Boston.*

100 agents could make money on this book in various sections of the country. None need apply except those who can command a small cash capital of from $25 to $50. Address, *post-paid*, the Publishers, 23 *Cornhill, Boston.*

For sale at the office of "THE CULTIVATOR." June 1—3t.

SHORT-HORN DURHAMS FOR SALE.

THE subscriber has a few young thorough bred Durhams on his farm two and a half miles from Troy, which he offers for sale, viz: 1 two year old bull—1 yearling bull—2 do. about eight months old—6 yearling heifers—2 two year old do.—and a few spring calves, bulls and heifers. These young animals were all got by my imported bull Duke of Wellington and my premium bull Meteor. Meteor was got by bull Duke of Wellington, out of my imported Duchess heifer.

The dams of some of these young animals, were imported; but from other herds than that of Mr. Bates; and others are from Durham cows, bred in this country, and are good milkers. The sires being from the celebrated herd of Thomas Bates, Esqr., (England,) renders them valuable for a cross on other Durham stock, as well as to farmers who wish to improve their herds. The estimation put upon this strain of blood by those who know its value, may be estimated by stating that the only bull calves which I have had to dispose of from the Bates cows and bulls, (three in number, have sold at $300 each. The young animals above enumerated will be sold at prices ranging from $100 to $150. GEO. VAIL.

Troy, May 1st, 1848—4t.

BURRALL'S SHELL WHEEL PLOW.

THESE Plows run *thirty per cent. lighter* than the common plow, and work well *on all soils, in all conditions.*

An impression has gone abroad that they answer only "on smooth lands where there are no stones, or other obstructions." Such is not the fact—they make good work on all lands, *rough or smooth*, and are more fully appreciated among roots or stones, and on stiff clay, and hard gravelly soils. Two thousand of them have been in use during the last three years among our best farmers, and give entire satisfaction.

For sale *wholesale and retail* (*warranted*) an assortment of the above (from No. 3 to 12) capable of turning a furrow of from 10 to 20 inches wide, and from 6 to 14 inches deep. A liberal discount to dealers. E. J. BURRALL.

Geneva, April, 1848—6t.

ENGRAVING ON WOOD.

THE subscriber is prepared to furnish Engravings on Wood, of all descriptions, at the shortest notice, and upon the most reasonable terms. Also,

DESIGNS AND DRAWINGS

of machinery for the PATENT OFFICE, furnished with the necessary specifications.

Inventors of agricultural implements, as well as others who purpose applying for Letters Patent, or wish to have an engraved representation of a machine will find it to their advantage to call, as the experience of the subscriber enables him to furnish the above in a short time, and at a less cost than is generally charged elsewhere.

N. B. Letters prepaid, containing a suitable sketch and description, attended to. In such cases, a reasonable fee is required.

Room No. 1, Sun Buildings. A. R. HAIGHT.
March 1—5t*. 107 Fulton-st., New-York.

GOOD NEWS FOR THE BLIND!

DR. KNAPP, Occulist, at 493 Broadway, Albany, N. Y., attends exclusively to cases of Blindness, from 9 to 5 o'clock. His method of restoring sight is of recent discovery, and the results have proved that where a person can distinguish day from night, a reasonable hope of recovery may be entertained. The treatment is without an operation.

On application, either verbal or by letter, persons will be designated (residents of Albany) who from being unable to discern any object, some for more than thirty years, (taken blind during infancy,) can now, after treatment, see to walk alone, and see articles as small as a silver pencil.

Those interested will consult the highest good of the Blind by giving such attention to the above as its nature merits.

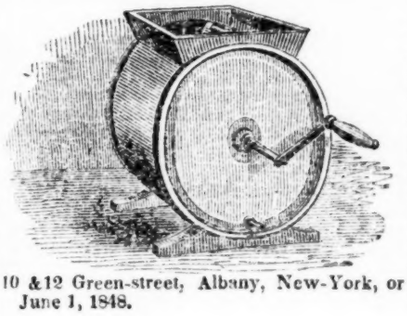
P. S Fluid Cataracts removed without an operation.

April 1—4t.

ASHES FOR SALE.

THE subscriber has on hand at his Soap and Candle Manufactory in Cabotville, situated a few rods from the Railroad, and a short distance from the Connecticut river, *Six or Eight thousand bushels of* LEACHED ASHES, mostly from hard wood, which are constantly accumulating, and which will be delivered on board a boat, or the cars, on reasonable terms—affording an excellent opportunity for Long Island farmers, or others having access to railroad or water communication, to improve their lands. For further particulars address G. M. BIGELOW,

May 1, 1848—6t. Cabotville, Mass.



"KENDALL'S CHURN." The sale of this Churn has been unequalled in the history of Churns. As they are all warranted to work to the satisfaction of purchasers, there is little risk in trying them. For prices, see Catalogue of Agricultural Warehouse gratis at Store, Nos 10 &12 Green-street, Albany, New-York, or by mail.

June 1, 1848. H. L. EMERY.

CONTENTS OF THIS NUMBER.

COMMUNICATIONS.

Law of Enclosures—How it can be improved, by WM. BACON, ... 235
New Patent Clevis, by H. L. EMERY, ... 237
Guenon's Treatise on Milch Cows, by A DAIRYMAN, ... 238
Experiments in grafting, by M. QUINBY—New mode of Grafting, by P. D. S., ... 244
Vines on Forest Trees, by I. HILDRETH,—Destruction of the Rose Bug, by HAMPDEN, ... 245
Management of Fruit Trees, by S. W. JEWETT, ... 246
Suggestions to Farmers, by ONEIDA—Spare the Spiders, by J. C. H., ... 250
Effects of Ashes, by C. HAMILTON—Comparative Weight of Good and Poor Milk, by E. CLARK, ... 253
Writers for Agricultural Papers, by M. W. PHILIPS, ... 254
Time for cutting Hay, by E. L. H.—Sundry Items, by E. C G., ... 255

EDITORIAL.

Brief Sketches of Farms, &c., ... 233
The Cotswold and New-Oxford Sheep, ... 234
Killing Animals in the Night, ... 236
A Profitable Speech—New use of India Rubber, ... 238
Effect of associated labor on Agriculture, ... 239
Dove-Cote and Rabbitry, ... 241
The Wire worm—the Steam Engine, ... 242
Improvement of Sandy and Gravelly Soils, ... 243
Destruction of Fruit Buds by Frost, ... 244
New and Newly introduced Apples, ... 246
Preserving Buds and Grafts—Salt for Celery, ... 247
Plan of a Farm House, ... 248
Composition of Milk, ... 249
Rhode Island Premium Farm, ... 251
Preservation of Animal and Vegetable Substances—Culture of Forest Trees, ... 252
Definitions of Chemical Terms, ... 253
Management of a Dairy Farm, ... 254
Answers to Inquiries, ... 256
Diseases of Animals—N. Y. State Fair at Buffalo, ... 257
Monthly Notices—To Correspondents, &c., ... 258
Notices of New Publications—Domestic Economy, ... 260

ILLUSTRATIONS.

Fig. 58—New Oxfordshire Ram, ... 235
Figs. 59, 60—New Patent Clevis, ... 237
Fig. 61.—Dove-Cote and Rabbitry, ... 242
Figs 62, 63—Gate and Leland's Spice Apples, ... 247
Fig 64—View of a Farm House, ... 248
Figs 65, 66—Plans of Floors of do., ... 249
Fig. 67—Grafting Knife, ... 244

THE HORTICULTURIST,

AND

Journal of Rural Art and Rural Taste.

EDITED BY A. J. DOWNING, ESQ.

PUBLISHED at the office of the Cultivator, Albany, N. Y., by LUTHER TUCKER, at $3 per year.—Two copies for $5. Vols. 1 and 2, completed with the June No. 1848, now ready for sale, either bound, or in paper covers to send by mail.

Contents of No. 1, Vol. III—for July, 1848.

Hints to Rural Improvers—Memoir of the President of the Massachusetts Horticultural Society—Further Notes on the Strawberry Question—Remarks on Hybridizing Plants—Successful Mode of Growing Gooseberries—Insects on the Native Grapes—The Red Diaper Plum—Cure for Plum Tree Knots—Hints to Cultivators of the Pear—Diseases of the Peach Tree in Western New-York—A Peach Orchard Resurrection—Ornamental Vases and Chimney Tops—The Beautiful Gardens of Italy—Design for a Small Cottage—Northern Spy Apple—Transactions of the Mass. Horticultural Society—Cleveland Cherries—The Pomological Convention—Raspberry Culture—Pomological Convention at New-York—The Character of the Strawberry—Cherry Trees at the South—Horticulture at Nashville, Tenn.—A word for Botanists on the "Great Strawberry Question"—Thorburn's Exotic Nursery—Perpetual Roses—Answers to Inquiries—Proceedings of the Massachusetts, Albany and Rensselaer, and Pennsylvania Horticultural Societies.

ILLUSTRATIONS.—*Plates.*—Portrait of Col. Wilder and view of a Cottage, together with thirteen wood engravings.

THE HORTICULTURIST for June is before us. This number completes the year, during which we hesitate not to say, every subscriber has received quadruple of valuable information over the cost of the work. The June No. has many valuable articles, which should be read by all Horticulturists, and we trust for their own interests, all will subscribe for the work, commencing with the July number, being the first for the ensuing year.—*Cleve. Herald.*

The June number, which completes the second volume, reached us a day or two since. We are pleased to learn from the publisher that it has already attained a circulation equal to that of any similar magazine in Europe, and far beyond any of its class hitherto attempted in America. It deserves this success. For editorial taste and ability, beauty of typography and embellishments, it is not surpassed by any periodical with which we are acquainted.—*Alabama Planter.*

STRAWBERRY PLANTS.

OF most of the celebrated fine varieties, for sale at the nursery of J. J. THOMAS, Macedon, Wayne Co., N. Y. Among these are the following:—Hovey's Seedling, Large Early Scarlet, Dundee, Prolific Hautbois, Duke of Kent, Black Prince, Boston Pine, Swainstone's Seedling, Myatt's Eliza, Hudson Bay, Red and White Alpine, &c. A part can be furnished in quantity at 75 cents to $1. 25 per 100—the remainder at 19 to 38 cts. per dozen. Packages forwarded by Express, and no charge for packing where orders amount to $3 or more.

Several of the above named varieties, with common culture, usually attain an inch to an inch and a-quarter in diameter, and are of excellent quality. If the roots are immersed in mud when set out, they may, with a few waterings, be transplanted in summer with scarcely a failure; and they should in no case be set later than the first of autumn, that the roots may become well established before winter, and good crops be afforded the next summer.

SELLING OFF.

LINNÆAN BOTANIC GARDEN & NURSERY. Late of WM. PRINCE, deceased, *Flushing, L. I., near New-York.* WINTER & Co., Proprietors. In consequence of the decease of the Junior, and of the advanced age of the surviving Partner, who therefore intends to relinquish the business, the entire stock of this establishment, comprising every description, including the newest and choicest varieties of fruit and ornamental Trees, Shrubs, Vines and Plants, Roses, Greenhouse plants, Box Edging, &c., will be disposed of in lots to suit purchasers, at very reduced prices, in order to close the business as speedily as possible.

Orders accompanied with the cash, to the amount of ten dollars or upwards, will be supplied at a reduction of 25 per cent. from the usual prices.

Nurserymen, venders, and others wishing to purchase by wholesale, will be supplied at such reduced prices according to quality and quantity, as will probably prove satisfactory to them. Young stock, both in the Fruit and Ornamental departments, supplied very low by the quantity.

An opportunity is afforded to Amateurs and Nurserymen to obtain extra sized and many new and rare specimen fruit and ornamental trees, shrubs and plants, at very moderate prices.

Extra sized ornamental and shade trees for streets, lawns and parks, low.

The establishment, now in the highest order and densely stocked, will be disposed of upon liberal terms, offering from its location, celebrity, saleable stock, greenhouses, dwellings, and other conveniences for conducting the business, very superior advantages to any person disposed to pursue it.

It is requested that letters of enquiry, &c. be *post paid.* Descriptive Catalogues *gratis.*

August 1, 1848.—2t.

FARM FOR SALE.

THE Subscriber offers for sale his farm situated in the town of Ghent, Columbia county, N. Y. 10 miles from Hudson, on the Hudson and Berkshire Railroad, four miles south of the Chatham Depot on the Western Railroad, ½ mile east of the Union Turnpike, and 7 miles from the village of Kinderhook.

This farm contains 234 acres, 40 acres of which is covered with good timber. The whole is well watered by streams and never-failing springs, and in a high state of cultivation. On the premises is a large dwelling house, nearly new, built in the very best manner, and replete with every convenience. The out-houses, consisting of a large barn, sheds, carriage houses, &c. &c., are in good condition. The fences, consisting chiefly of stone wall, (built with stone from a quarry on the premises,) are in excellent order. The soil is free from stone, is easy of tillage, and bears as high a reputation for productiveness as any in the Empire State. For terms and further particulars enquire on the premises.

TOBIAS L. HOGEBOOM.

Ghent, July 13, 1848—2t.

GUANO FOR SALE.

NOW landing from ship Aglare, a very superior cargo of Patagonian Guano. Price $35 per ton, for all quantities exceeding 1,000 lbs. Apply at the New-York Agricultural Warehouse and Seed Store, Nos. 189 & 191 Water-street, New-York.

July 1, 1848.—2t. A. B. ALLEN & Co.

THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by

LUTHER TUCKER, PROPRIETOR.

LUTHER TUCKER & SANFORD HOWARD, Editor

$1 per ann.—7 copies for $5—15 copies for $10.

Payable always in advance.

PUBLISHING AGENTS IN

NEW-YORK—M. H. Newman & Co., 199 Broadway;
BOSTON—Joseph Breck & Co., 52 North-Market-Street;
PHILADELPHIA—G. B. Zieber & Co., Booksellers:

Of whom single numbers, or complete sets of the back volumes, can always be obtained.

☞ ADVERTISEMENTS inserted in the Cultivator, at the rate of $1 per 100 words, for each insertion.